

AMERICAN
JOURNAL OF INSANITY,
FOR JANUARY, 1870.

DOES MATERNAL MENTAL INFLUENCE
Have any Constructive or Destructive Power in the Production of Malformations or Monstrosities at any Stage of Embryonic Development?

BY G. J. FISHER, M. D., OF SING SING, N. Y.

From time immemorial the phenomena of monstrosities have attracted the attention of philosophers as well as elicited the curiosity or superstition of the illiterate. The subject was frequently alluded to by many ancient authors, among whom may be cited Hippocrates, Aristotle, Pliny, Galen, Empedocles, and Democritus. In more modern times the subject has received so large a share of the attention of physicians and embryologists that the literature of teratology during the past three hundred years embraces a bibliography of several hundred volumes, not including numerous brief essays which have appeared in serial publications, transactions and journals of scientific societies; and also numberless accounts and descriptions of individual cases of monstrosities which are scattered through the pages of the same.

Until a quite recent period, all of the great deviations from the normal type which had been observed to occur in the development of the human body, were regarded with wonder and superstitious awe. They were either

looked upon as prodigies, which, through Divine anger were entailed upon the unfortunate parents for the expiation of sins of omission or crimes of commission; or they were believed to be the direct results of demoniacal influence. The doctrine of their satanic origin gave rise to the barbarous practice, confirmed and established by Greek and Roman laws, of destroying the lives, not only of the more hideous but of all such unfortunate children as the parents or populace were disposed to call "monsters." The progeny of the devil as they believed these poor victims to be, were consigned either to the flood or flames. Riolanus, a distinguished writer in the latter part of the sixteenth and beginning of the seventeenth centuries, probably merely reflected the popular opinion then existing, when he gravely and humanely wrote, that children with six fingers, giants, dwarfs, etc., who are made after the image of the devil, *may* be allowed to live, but should be removed from the sight of the public, and perpetually shut up in some chamber or place of security.*

The spirit of Riolanus, and the age in which he flourished, which was but a milder expression of a yet earlier period in the world's history, still lingers in the present age in the minds of not a few, (but I am glad to say, so far as I am aware, has no advocates in the medical profession;) a spirit which not only justifies, but almost demands, that the accoucheur shall destroy the lives of the more unsightly monsters as soon as they are born, either by suffocation or anaesthesia.

In the age of Cicero, through whose eloquence mankind was taught a more enlightened philosophy than had previously been entertained, every monstrosity which occurred among either men or animals, was looked upon

* Riolanus; *An Romanorum praeceptis monstra interfici debeunt.*
Paris, 1605.

as the harbinger of some dread and dire calamity; it was, indeed, this circumstance that gave origin to the name, derived from the verb *monstrare*.

In the curious old folio of Conrad Lycosthenes, published about the middle of the sixteenth century, will be found numerous cases in which, after giving the dates and localities of birth, the circumstances attending their occurrence, and descriptions of human or animal monsters, he proceeds to relate and illustrate with wood engravings, (with which the book abounds,) the calamity or misfortune which followed, whether it were war, famine, pestilence, fire or flood, whirlwinds or earthquakes.* The coincidents were sometimes so striking that the superstitious idea of their portentous nature was held as a universal popular belief, quite as strongly as its congener superstition of the present day, in regard to the origin of malformations through the power of the maternal mind transmitted to the embrion in utero.

As an example of the style and manner of treating the subject, by this quaint old author, I will give the following case. Omitting the details, which he gives in extenso, of a case of cranium-joined sisters, born in 1495, he assigns the following *cause* for their occurrence; "Two women were conversing, one of them being pregnant, and a third one coming up, knocked their heads

* C. Lycosthenes, *Prodigiorum ac Ostentorum Chronicon quæ praeter naturæ ordinem, modum et operationem et in superioribus mundi regionibus, ab exordiis mundi usque ad hæc nostra tempora acciderunt.* Quod portentorum genus non temere evenire solet, sed humano generi exhibitum, severitatum iramque, Dei adversus scelera, atque magnas in mundo vicissitudines portendit. *Partium ex probatis fideque dignis, authoribus graecis atque latinis; partim etiam ex multorum annorum propria observatione, summa fide, studio ac sedulitate, adjectis etiam omnium rerum veris imaginibus.* Basileæ, 1557. Folio.

together, whence, the pregnant one being frightened, gave the mark of the concussion to the foetus." Lycosthenes then gravely adds, as an equally rational *result* of the appearance of this remarkable prodigy; "In this year the Turk (Sultan) prepared a great army against the Christians. Thereupon great preparations for defence were made throughout Germany."

A more extended history of the subject would furnish abundant evidence, even from a remote antiquity, of the existence of an universal belief in the supernatural origin, either Divine or demoniacal of all monstrosities; and as a consequence of this popular superstition, followed a belief in the portentous design of their occurrence; which errors have been propagated by verbal and written tradition, through century after century, with scarcely the slightest modification or melioration almost to the present day.

However curious, interesting or useful the history of monstrosities may be, the limits of this paper will not admit of further amplification in this direction; the reader is therefore referred to other sources for information, and perhaps I may be excused for calling his attention to the published portion of my own essay upon monstrosities, in which the extensive literature of teratology, particularly that relating to compound monsters, (Diploteratology) is given in chronological order, embracing a period of over three hundred years.*

There exists at this moment an almost universal popular belief, in which a large proportion of the members of the medical profession is included, that maternal mental influence during pregnancy is adequate to the production of almost any degree and variety of malformation. It is the purpose of this paper to examine the

Vide Articles on Diploteratology, in *Transactions of the N. Y. State Med. Soc.* for the years 1865, 1866, 1867, 1868.

grounds of this belief, and to determine how far it is justified by well-established facts and logical and scientific reasoning.

In the discussion of the question which furnishes the caption of this article it is first necessary distinctly to understand what is claimed by the advocates of the affirmative before attempting to refute the grounds upon which they endeavor to sustain their belief.

To begin with the lesser results of alleged maternal mental influence, we are told by the adherents of this fearful doctrine, that pregnant women who have had ardent longings for certain articles of food, for example almost any of the fruits, do, and are extremely liable to bring children into the world, on the surface of whose bodies will be found, faithfully and indelibly marked—as true to nature as if chromo-lithographed—not only the form and figure but even the color of the particular fruit longed for, apples or pears, plums or cherries, grapes or currants, strawberries or any other variety of small fruits that the capricious appetite of the gestating females may crave. There are others who go farther, and tell us that a remarkable and mysterious sympathy exists in these "marks," long after birth, whereby at the sight of the corresponding real fruit, or at the season of its ripening, the nevus heightens its color and intensifies its resemblance!

It is also asserted that the sight of unpleasant objects is enough to arrest and pervert the laws of embryological development to a frightful extent. Among the minor *results* are the reproduction of animal forms upon the skin, while in other instances the smaller extremities are transformed into shapes of striking resemblance to the objects of disgust or affright! Accordingly, cases are related where the sight of leeches has resulted in accurate cutaneous figures of the *Hirudo* on the surface

of the unfortunate foetus, here one stretched at full length, and there one coiled as in the act of sucking its victim's blood!*

A snake crawls into a house; an affrighted pregnant female on beholding it points to it with her right index finger, immediately faints away, and subsequently (how long we are not informed,) is delivered of a child whose right index finger was so metamorphosed that "the end of it was, and still is, devoid of everything like a nail, save in three points, which correspond in size and position to the eyes and mouth of a snake, and presents almost an exact resemblance to the head of a serpent." (Ed. Warren, M. D., of Edenton, N. C., in *Am. Med. Monthly* for 1854, quoted by O'Reilley, op. cit.)

Dr. Warren adds, "I have seen some cases in which the maculae resembled fruit, and know of others in which *fish were distinctly represented*. In all of these, the effect of an impression made on the mind of the mother

* For cases illustrating the above statements, and others which are to follow, see the following references. WM. H. HAMMOND. "On the Influence of the Maternal Mind over the Offspring during Pregnancy and Lactation." The Quarterly Journ. of Psychological Med. and Med. Jurisprudence. Vol. II., p. 1-28: N. Y., Jan. 1, 1868. JOHN O'REILLEY. "The Nervous and Vascular Connection between the Mother and Fetus in Utero." Pamphlet, pp. 76, 8vo: N. Y., 1864. D. S. CONANT. "On the Science, Causes, and Anatomical Peculiarities of Human Monstrosities." Trans. of the N. Y. Acad. of Med., Vol. II., p. 269-298. Jan., 1862. "Discussion of Dr. Conant's paper on Monstrosities," before the N. Y. Acad. of Med., Jan. 15th, 1862, participated in by Drs. Detmold, O'Reilly, Conant, Post, Peaslee, Worster, I. E. Taylor, Martin, and Horace Green. Bulletin of the N. Y. Acad. of Med. Vol. I., p. 362-373. MILLIGEN. "Curiosities of Medical Experience." London, 1837: 2 vols. 8vo. DUGAS. "Congenital Marks." Southern Med. and Surg. Jr., reprinted in The St. Louis Med. Reporter. Vol. I., p. 587. 1867. POYNTZ. "A World of Wonders, with Anecdotes and Opinions concerning Popular Superstitions." London, 1845.

by some external cause could be traced and established. Thus a woman was fond of pears, and longed intensely for them during her pregnancy; when her child was born, a small pearlike tumor was pendant from its ear, and another from the last finger of the right hand. Another desired to indulge in eating crabs, but for some reason was unable to gratify herself in that respect. Her child had the figure of a crab distinctly marked upon it, and bears the nævus to this day." (*Ibid.*)

A mouse ran suddenly across the floor; the offspring of the mother who saw the mouse, has "growing from the back of its neck a little prolongation, an inch and a half in length, covered with silky hair, and bearing a striking resemblance to the tail of the mouse." (Prof. Alfred C. Post. *Bulletin of N. Y. Acad. of Med.*)

An indulgent husband dashed out the brains of an annoying cat when his wife was four and a half months advanced in pregnancy; when the full term had expired, she produced "a child whose head strikingly resembled that of a cat." (Dr. S. Hart, reported to the King's Co. Med. Soc., 1861, quoted by O'Reilley.) The same authority had another cat-case, April 8th, 1843; and a dog-case, Feb. 1st, 1855. "The head of this child," he tells us, "closely resembled that of a dog, both in form and feature, and was also possessed of pendulous ears." The *cause* assigned was "annoyance from a neighbor's dog," and "passing two others in the street in circumstances that excited in her mind extreme indignation." The effect of this trio was to change the cephalic type from human to canine, and that too after three months of normal development had already progressed! Here maternal mental influence is believed to produce destructive changes which are followed by reconstruction on a new type. (*Ibid.*)

A woman, between four and five months advanced in

pregnancy, had an irresistible desire for a fine salmon which she saw in a market; this she purchased, despite her poverty, and as a result, at the end of the full term of normal gestation she was delivered of a child, "the head and body of which presented a peculiar and strange conformation, in truth it was salmon-shaped, whilst the fingers and toes were webbed, representing the fins or tail of the salmon." (Dr. Horsfield, Fellow of the N. Y. Acad. of Med.; vide O'Reilley's *Essay*, op. cit.)

A beetle crept across the back of a pregnant lady's neck, who, thereupon, "fainted and continued in a state of suspended animation for a long time." She was subsequently delivered of a coleopterous child, "without eyes in its sockets, the body presenting a truncated unseemly mass, with the extremities (upper and lower,) very thick, rolled round with a thick fold of the soft parts in connection with the trunk, and then tapering to points; there were four spots or holes over each hip." [8-punctata. *Say.*] (Prof. F. H. Hamilton, vide O'Reilley op. cit.)

Prof. Valentine Mott stated that he knew a *medical man who had a faithful and perfect picture of a pig represented by a nævus on his back*. The history connected with this peculiar case is easily told. His mother, during the period of gestation, was frightened by a black pig suddenly running from behind a currant-bush whilst she was walking in her garden.

"Prof. Mott removed from the side of a lady a nævus representing in every respect a *veal cutlet, with grains of pepper visible on it*. (The preparation can be seen in Prof. Mott's museum.) The history connected with this case, it was thought would explain the phenomenon. The lady's mother wished to eat a veal cutlet, and sent her husband to procure one; but on his return without

it, she felt greatly disappointed, slapped her hand on her side, exclaiming, ‘O my! what shall I do?’ The infant on being born, was found to have the nævus, as already described, at a part corresponding with the part of her side she struck with her hand.” (Vide O'Reilley, *op. cit.* p. 52.)

And thus the writer could go on multiplying whole series of “modern instances,” not to mention those recorded in books published previous to the present century and running back for ages. They are all similar, differing only in degree, with occasionally one in which the coincidence of the “mark” or malformation, and the alleged cause, is very striking, and, on a superficial view, would appear to stand in the relation of cause and effect.

A more careful investigation of such instances, however, as I shall endeavor to show by the consideration of a series of cases in which the same vices of conformation are found, and yet a great variety of different causes assigned for their production; and also a much larger number in which no mental or physical explanation whatever has been attempted; would seem seriously to invalidate the hypothesis of their origin from maternal mental influences.

The question under consideration is not merely a popular one: a strong belief in the power of maternal mental influence in the production of malformation in the foetus exists at this moment in the minds of many eminent medical men in this country and also in Europe, as will appear, not only by the recent cases above cited, but from many others which the limits of this essay will not admit of referring to. A few other examples only will be added in this connection.

Prof. Carnochan, of New York city, wrote to Dr. O'Reilley, (*op. cit.*.) in 1864, giving him an account of

two cases of hare-lip, which he says, "I have no doubt occurred from maternal impression conveyed to the foetus." One, he states, by a dentist who roughly lifted the mother's upper lip at the sixth month of her pregnancy; the other, by a female, then pregnant eight weeks, seeing two girls suddenly enter a room, who each had been imperfectly relieved by surgery of this deformity. Prof. Carnochan then adds, "I could proceed enumerating cases of a similar character, proving, as I believe, the positive influence of maternal impressions upon the foetus in utero. I am disposed to the belief that the impressions have most effect during the early periods of pregnancy."

Prof. Wm. A. Hammond, (Quarterly Journal of Psychological Medicine, &c. Vol. II. 1868,) after quoting a great number of cases from ancient and modern authorities, many of which are too apochryphal and absurd to report, concludes by giving a few cases which he considers to be strong and convincing enough to settle the question beyond peradventure. The following are those upon which he thinks the doctrine of maternal mental influence in the production of malformation is established incontrovertibly. Prof. Hammond says, "Doubtless many of the stories which are told in illustration of this theory are false, many others are exaggerations, and many again are mere coincidences; but after eliminating all these classes, there remains another group which has every appearance of being based upon actual truth, and which it is impossible for the candid inquirer to reject. Take for instance the case related by Millingen already quoted, of the child born with the mark of a leech on its foot, and that related by Russegger, of the woman bitten by a dog, and whose child was marked on the leg with three depressions like those made by the dog's teeth on the corres-

ponding part of the mother's body; or the following, which like both the above, rest upon the direct personal observation of scientific men, and not upon hearsay or rumor: Dr. Delacoux (*Education Sanitaire des Enfans. Deuxième édition. Paris, 1829; p. 57.*) says that in the month of January, 1825, he was called to attend a woman in the village of Batignoles, near Paris, who, the evening before, had been delivered of a six month's foetus, horribly deformed. The upper lip was in a confused mass with the jaws and the gums; the vomer was absent, and the nasal fossæ and the mouth formed a single cavity; the right leg was amputated at the middle, and the stump had the form of a cone, at the apex of which was the tibia, the size of a goose-quill, perfectly ossified, and projecting about two lines from the soft parts. The mother of this being, who was a cook, on entering one morning, about the third month of her pregnancy, the house where she was employed, was seized with horror at the sight of a porter with a hare-lip and an amputated leg."

Prof. Hammond relates the following case, "which," he says, "occurred in my own experience, and is fully as striking as any that have been related, and scarcely admits of a doubt as to the influence of the maternal mind over the physical structure of the foetus. A lady in the third month of her pregnancy was very much horrified by her husband being brought home one evening with a severe wound of the face, from which the blood was streaming. The shock to her was so great that she fainted, and subsequently had an hysterical attack, during which she was under my care. Soon after her recovery she told me she was afraid her child would be affected in some way, and that even then she could not get rid of the impression the sight of her husband's bloody face had made upon her. In due time

the child, a girl, was born. She had a dark red mark upon the face, corresponding in situation and extent with that which had been upon her father's face. She proved also to be idiotic."

"My friend Prof. Dalton has mentioned to me the following case: The wife of the janitor of the College of Physicians and Surgeons, during her pregnancy *dreamed* that she saw a man who had lost a part of the external ear. The dream made a great impression upon her mind, and she mentioned it to her husband. When her child was born a portion of one ear was deficient, and the organ was exactly like the defective ear she had seen in her dream. When Prof. Dalton was lecturing upon the development of the foetus as affected by the mind of the mother, the janitor called his attention to the foregoing instance. I have examined this child, and the ear looks exactly as if a portion had been cut off with a sharp knife."

After relating the above cases Prof. Hammond gives expression to his views on this subject, by the use of the following strong language. (Op. cit., p. 19.)

"The chances of these instances, and others which I have mentioned, being due to coincidence, are infinitesimally small, and though I am careful not to reason upon the principle of *post hoc ergo propter hoc*, I cannot—nor do I think any other person can, no matter how logical may be his mind—reason fairly against the connection between cause and effect in such cases. The correctness of the facts only can be questioned; if these be accepted the probabilities are thousands of millions to one that the relation between the phenomena is direct."

Prof. H. does not believe that there exists any direct nervous connection between the mother and foetus; he maintains that "it is through the medium of the blood that all impressions from her mind to her offspring must pass."

Prof. H. quotes the opinions of Drs. Dalton and Sequin on this subject.

Dr. Dalton* says, "there is now little room for doubt that various deformities and deficiencies of the foetus, conformably to the popular belief, do really originate in certain cases from nervous impressions, such as disgust, fear or anger, experienced by the mother."

Sequin† remarks: "Impressions will sometimes reach the foetus in its recess, cut off its legs or arms, or inflict large flesh wounds before birth; inexplicable as well as indisputable facts, from which we surmise that idiocy holds unknown, though certain, relations to maternal impressions, as modifications of placental nutrition."

In review of the whole subject, Prof. Hammond says: "From the facts and arguments which I have brought forward, the conclusion is irresistible that the mental influence of the mother over her offspring, which begins whilst the germ is still in her ovary, is continued through pregnancy and lactation."

Such are the statements, and such the character of the cases brought in evidence, upon which the doctrine of maternal mental influence in the production of vices of conformation and monstrosity is believed by its advocates to be established. It now remains to array the facts and arguments which go to prove the unsoundness of this popular opinion, and to endeavor to reconcile the apparently discordant testimony with the laws of normal embryonic development.

This inquiry involves the following questions:

* A Treatise on Human Physiology, etc. 4th edition. Philadelphia, 1867, p. 614.

† Idiocy, and its Treatment by the Physiological Method. New York, 1866. P. 41.

1. *To what extent has traditional superstition been the means of establishing the almost universal popular belief that the maternal mind exercises a constructive or destructive power, in the development of the fœtus in utero, adequate to the production of various degrees of malformation?*

The editor of the *Journal of Psychological Medicine*, in his article on the influence of the maternal mind, states that the doctrine of such direct influence upon the foetus in her womb, "among the people at large throughout the civilized world, rich and poor, refined and vulgar, educated and ignorant, is received with unquestioning faith as a matter of course. Indeed it would sometimes appear to be almost instinctive. Where there is so universal belief in the existence of certain facts it may safely be assumed that there is some truth."

It does not by any means follow that popular opinions are founded on fact. From the earliest times to the present moment popular errors and superstitions have existed, and the pertinacity with which they have been held has always constituted the greatest barrier to the recognition and propagation of truth and the advancement of science. The present popular belief in the power of the mother's mind to mark or malform her offspring is no more universal than was the popular superstition a few centuries since which attributed all vices of conformation and monstrosity to the direct power of an enraged deity, or the influence of the devil. It was rarely if ever believed to be the result of the mother's mind. In the introduction to this paper, I have stated that as a result of the supposed supernatural origin of monsters it was believed, by the "rich and poor, refined and vulgar," etc., etc., "with unquestioning faith as a matter of course," that they were prodigies, and portended direful events. This "universal belief"

was assumed to be founded in truth, and individuals, communities and even nations governed themselves accordingly; but the *safety* of such assumptions is a matter of considerable doubt.

The civilized world has made one long and progressive step in removing the origin and cause of physical malformation from the sphere of devils, or angry and unappeased gods, to the more controllable and less frightful power of the unfortunate mother's mind, disturbed by ardent longings for innocent fruits, or by the sight, sound or touch of objects of disgust or affright. It is to be hoped that the "rich and poor, refined and vulgar, educated and ignorant," throughout the *enlightened* world, will relinquish their "unquestioning faith" for a spirit of philosophical inquiry, and make another progressive stride, and seek the explanation of malformation in the realm of pathological histology; and regard the anxious and sensitive mother as being no more responsible for deviations from normal foetal development than the unthinking brute, or the cold-blooded reptile which produce monstrosities identical in kind, in degree, and in variety; and to go still farther, the unfeeling plant, which is alike subject to arrested, retarded or excessive development, producing its dwarfs, its giants, its distorted growths, and its double-monsters. Science would have made but little progress, perhaps scarcely have had an existence, if all men had been content with an "unquestioning faith," with an "instinctive" knowledge, and with the safety of assumed truth in a "universal belief."

There was once a universal belief in astrology, and every man had his nativity cast, and his horoscope drawn, with more "unquestioning faith" than a disciple of Fowler and Wells would undergo a craniological examination and receive his phrenological chart.

A century has scarcely past since "the people at large" had "unquestioning faith" in the anti-scorfulous power of the "Royal Touch," and so numerous were the coincidences of cure following the touch by royal hands that "no person could reason fairly against the connection between cause and effect in such cases."* "The Royal Touch" has been displaced in this age, by Iodine, Cod Liver Oil, Regimen and Hygiene. The "instincts" of "the people at large in the civilized world" will admit of still farther enlightenment; "the refined and vulgar" have yet several important lessons to learn.

I speak reverently when I say that the Bible was not given to man to guide him in the acquisition of scientific knowledge: science offers no explanation for miracles, for the acts of those who could smite the rocks and bring forth gushing fountains; or the sea, and divide its waters; or place peeled rods before the flocks in the gutters and watering places that when "the flocks conceived before the rods" they should bring forth "cattle ring-streaked, speckled and spotted."†

The story of the peeled rods and of Jacob's cattle has doubtless done much to perpetuate the popular notion of maternal mental influence being adequate to the production of malformation in the offspring.

Hippocrates, nearly five centuries before Christ, believed in this influence, with almost as "unquestioning faith," as Hammond, (late Surgeon General U. S. A.,) almost nineteen centuries after, now does.

The former says: "If pregnant women conceive a fancy for eating earth or charcoal, and really do eat

* In the year 1682, Charles II. "touched" 8,577 persons for the cure of the "King's Evil." In 1699 he only "touched" 2,983. *Vide London Medical and Physical Journal: vol. XVII., p. 477, 1807*, for curious information on this subject.

†*Genesis, chap. XXX., v. 37-39.*

either of these substances, the infant will be born with the representation thereof impressed upon the head." (*De Superfætatione.*)

Galen also believed in the same doctrine, but none of the ancients used as strong language as the modern professor of mental diseases, viz.: "The probabilities are *thousands of millions to one* that the relation between the phenomena is direct." Certainly it would appear that a question must be either perfectly self-evident, or exceedingly doubtful, that would justify the employment of such powerful language.

It is perhaps needless to pursue this subject farther: the universality of popular superstitions, the pertinacity with which the credulity of the people at large clings to traditional errors, is no more remarkable in this instance than in numerous others. The word lunacy refers to the influence of the moon in the causation of insanity; the people are hardly done with the anatomical figure, in the family almanacs, surrounded by the zodiacal signs pointing to the members of the body which they were believed to govern pathologically; and medical books are only now free from the astrological superstitions of a former age, in which the influence of solar, planetary, and stellar bodies in the government of plants, and in bestowing medicinal virtues or toxicological properties upon them, was recorded with "unquestioning faith."

2. *Is there anything like law in the alleged results of maternal mental influence in the production of malformation?*

The discussion of this question involves several inquiries, viz.:

a. What is the relation of maternal mental emotions, shocks, and apprehensions during the period of preg-

nancy to the actual frequency and character of malformation?

The experience and observation of every medical man renders it indisputable that the mind of the gestating human female is peculiarly sensitive, impressible and morbidly apprehensive. Particularly during the early months of pregnancy her appetite is capricious, and her tastes fastidious; she is the victim of nausea, loathings, and disgust, or of strange and ardent longings for special articles of diet, or for substances improper for food, or deleterious to health. She is in the fullest sense of the word "nervous," and quite generally irreconciled to her condition. Her mind, in most cases, is sooner or later in the course of her pregnancy, filled with apprehension, and often with alarm, lest through mental emotion—imagination or shock—she shall entail some malformation upon her offspring. Whether these apprehensions are "instinctive," or the result of popular superstition, or arise from both of these elements, it is not necessary here to inquire; yet certain it is that few pregnant females are free from them, or pass the period of gestation without the occurrence of one or more circumstances which are calculated to make intense impressions upon her mind.

I have always felt a profound interest in this subject; and for twenty years past, during which time I have been a general practitioner, and attended at the birth of over twelve hundred children at full term, and numerous others more or less premature, I have made it a habit to inquire of ladies previous to confinement in regard to their apprehensions of deformity in their offspring; and I can truthfully testify that by far the larger number of those thus interrogated expressed their fears of such a result, and frequently specified the nature of the circumstance and the character of the deformity

which it was feared would follow; and yet in my entire practice only three examples of malformation have occurred, viz.:—1. A case of supernumerary digits on each hand, (this being hereditary in the family.) 2. A case of *spina bifida*, associated with congenital hydrocephalus, both of which were intra-uterine foetal diseases; and 3. a case of dicephalous monster. All the countless longings of these sixty-score and more of pregnant women, their excited imaginations, their shocks from objects of disgust or of terror, all the hare-lips, the wounds, the armless or legless men they saw, the cats, and dogs and other beasts they encountered, were powerless to produce a single case of malformation.

I believe that my own experience will be found to accord with that of most obstetricians. The fact is malformation and monstrosity is exceeding rare, and bears to the whole number of births a very small proportion indeed.

I have been unable to find any very recent or extensive statistical tables of monstrosities; the most extensive, thus far noticed, is in the *American Journal of the Medical Sciences*, N. S.; vol. VI., p. 240, July, 1843, taken from Mr. Wilde's work on Austria. These statistics are the result of the experience of the Imperial Lying-in Hospital, in Vienna, for the eight years ending the 31st Dec., 1840.

The following table exhibits the number and variety of malformations in 23,413 births.

Clubfoot,	-	-	-	-	-	16, or one in	1,463.31
Hare-lip,	-	-	-	-	-	20 " "	1,170.65
Simple do.,	-	-	-	-	-	9 " "	2,601.44
Cleft palate,	-	-	-	-	-	11 " "	2,128.45
Spina bifida,	-	-	-	-	-	5 " "	4,682.60
Hydrocephalus,	-	-	-	-	-	6 " "	3,902.16
With six-fingers,	-	-	-	-	-	3 " "	7,804.33

[Carried Over,]

[Bro't forward,]

Imperforate anus,	-	-	-	2, or one in	11,706.50
Hemicephalus,	-	-	-	1 "	23,413.00
Acephalus,	-	-	-	1 "	23,413.00
Umbilical hernia,	-	-	-	1 "	23,413.00
Without eyes,	-	-	-	2 "	11,706.50
Wanting superior part of vertex,		1	"	"	23,413.00
With plurality of fingers and toes		5	"	"	4,682.60
With lenticular cataract,	-	-	1	"	23,413.00
Wanting one upper extremity,	-	2	"	"	11,706.50
Hydrocephalus with spina bifida and closed anus,	-	-	1	"	23,413.00
Clubfeet and closed anus,	-	-	1	"	23,413.00
					<hr/>
Making in all,	-	88	"	"	266 -

It will be observed that nearly all of these are either the results of foetal diseases or are simple arrests of development.

It has been estimated that double monsters are so exceedingly rare that not more than one occurs among over twenty millions of births, taking the aggregate in the entire world for any considerable period of time. Monstrosities of all kinds are of much more frequent occurrence among the lower animals, particularly the domesticated, than in the human family.

When we compare the fact of the frequency of disturbed mental emotions, the great anxiety and alarming apprehensions of so many gestating females, with the fact of the extreme rarity of human malformations, it would seem clearly proven that the maternal mind does not exercise any influence in the abnormal physical development of the foetus in utero.

b. Are coincidents sufficiently numerous and authentic to warrant a rational belief in the production of monstrosities by the emotions of the mother's mind; emotions resulting from desiring or abhorring certain articles, or by the sight or touch of objects of delight, of disgust or of horror?

The existence of a general belief that the mother's mind can influence and greatly modify the development of the foetus in utero would naturally lead every mother, who produces a malformed child, to review all the circumstances of her life which had transpired during the period of her pregnancy, with a view to finding the most satisfactory explanation for the occurrence of the malformation in question. If it is a red spot on the skin of any part of the body—an aneurism by anastomosis—she has no difficulty, *after* the birth of the child, to call to mind the ardent longings she had experienced for some fruit which it was thought most to resemble, or some blood-spot or wound she had seen; or if her fertile imagination, or that of her friends, suggested its resemblance to an animal, as a mouse, or crab, or fish, or a peppered veal-steak, then the active mind would call up from the recording ganglia of her brain the remembrance of the fish, flesh, or food which had produced the metamorphosing mental emotion which had been transmitted, in some mysterious manner, to the foetus in her womb!

The same method of explanation is adopted in every other form of monstrosity which is known. Would it appear at all strange, under such circumstances, that coincidences of assumed mental causes, and supposed resemblances of the offspring, to the objects alleged to have excited the mental emotion, should occasionally be reported to have occurred?

While I ignore all faith in such mental explanations of abnormal physical development, I am not astonished by the number of instances of alleged coincidence which I have either heard of, or found recorded in books; they are far less in number than I would have supposed them to be before making a thorough inquiry into the matter.

Let us examine this question of coincidence of alleged

cause and effect a little more carefully, and it will be found perhaps to be less common than strange.

The celebrated William Hunter, author of that magnificent work, "*The Anatomy of the Human Gravid Uterus*," &c., &c., pursued the right course in the investigation of this subject. He made inquiry, in two thousand cases, of the mothers *before* the birth of their children, in regard to any apprehensions which they had experienced as to markings, deformities or monstrosities, and he carefully noted their answers and the cause, or causes, which they supposed were sufficient to give rise to such malformations. It is certainly remarkable that in no case did a single coincidence of mental emotion and a corresponding abnormal development occur in all his observations. My own experience, which I have before alluded to, in which I have followed Hunter's method of making inquiry previous to the birth of the child, entirely coincides with the results of his. I believe that if accoucheurs generally would adopt this course there would soon be less believers in the power of the mother's mind to modify the development of the foetus in the womb.

For every case which has been related or recorded where there appeared to be any relation between the alleged cause and effect, numerous instances could be found in which no result whatever followed mental impressions equally powerful and protracted. The latter class of cases are seldom recorded while the former are quite likely to be.

Cases not unlike the following, related before the N. Y. Acad. of Med.,* must have occurred in the practice of most physicians.

* Vide *Bulletin of the N. Y. Acad. of Medicine*: vol. I., p. 309.
Jan. 15, 1862.

Dr. CONANT referred to the case of a lady who had accustomed herself to feed a pig which had lost one leg. The lady became pregnant, but still continued her practice, notwithstanding she was urged to the contrary. She was then told the reason why she should cease to take an interest in the animal, viz., that she would mark her child. She then became much alarmed, and continued in that state of mind during the remaining months of gestation, confidently expecting a deformed offspring. But, contrary to such expectation, she was delivered of a fine, healthy, and perfect child, who is living to this day. A case was also related to Dr. C., the other day, of a lady in Massachusetts, who after becoming pregnant, one day stepped upon a toad on the door-step. After that, during the whole of the remainder of the summer, the toad seemed to come constantly in her way. On hearing of the circumstance, her female friends all told her that she would certainly have a child shaped like the toad. She was consequently in great anxiety until she was delivered, when she, as well as her friends, were agreeably disappointed to find that it resembled in not the slightest degree the loathsome animal.

The fact is that the cases of occasional coincidence are so rare that they bear an almost infinitesimal ratio to the numberless instances in which no effect whatever has followed the alleged cause. Objects disgusting and shocking to behold, distorted cripples, hunchbacks, the eyeless and noseless, the armless and legless, those with great tumors, ulcers and horrid cancers, or covered with frightful scars or leprous scales, annually meet the sensitive sight of tens of thousands of pregnant women, at all stages of gestation, in all populous cities and towns; and yet no well authenticated instances of corresponding deformity are ever known to follow as a result. If Providence had left the development of the human foetus to the influence of maternal whims and caprices, to an imitative metamorphic power which would result in foetal reproductions of every object which impresses the maternal mind with disgust or horror, what would have been the present state of mankind after thousands of years of accumulated abnormities!

c. Do not malformation and monstrosities, identical in kind and in degree, recur again and again in the human subject, and are not a great diversity of mental causes assigned for the production of any given form?

The facts are so numerous which prove the affirmative of this question, that it will not be necessary to go into minute detail to sustain the position.

The whole literature of teratology, as well as the anatomical, pathological and obstetrical museums of every country, furnish uniform and abundant evidence of the frequent duplication of every known variety of malformation, and also of the fact that all the forms admit of classification, as well as the various objects in any department of natural history.

Malformations are not infinite in variety, but definite and distinctive. Teratology is now acknowledged to be a science.

It is an indisputable fact that the believers and advocates of maternal mental power, in the production of the numerous vices of conformation in the foetus, assign a diversity of mental influences as the cause of any given form. Thus we find hare-lip is said to result, in one case, from the sight of a person afflicted with this deformity; in another, from the sight of a hare, or even the picture of a rabbit; in another, from the want of delicacy of a dentist who raised the mother's lip rudely while manipulating in her mouth.

The following cases are published in Dr. O'Reilley's essay, (op. cit. p. 59;) they were selected from the notebook of Frank H. Hamilton, Professor of Military Surgery, &c., in which forty-five cases of operation for hare-lip are recorded:

No. of case.	Name.	Sex.	Single or Double.	CAUSE ASSIGNED BY MOTHER.
2	A. A. G.	F.	Single	Lifting her lip to open a gum-boil.
4	E. W.	M.	"	Extraction of one of her teeth.
5	A. G. T.	M.	Double	" " " "
9	W. J.	M.	Single	Seeing a rabbit in her fourth month of pregnancy.
15	J. L.	F.	"	Dressing the head of a boar against her will.
24	N. H.	F.	"	Seeing a hare-lip at her fourth month of pregnancy.
27	— B.	M.	Double	Extraction of a molar at her sixth week of pregnancy.
34	A. A. F.	F.	Single	Frightened by a man with hare-lip.
35	J. H.	F.	"	" " woman " "
45				Two uncles of mother had hare-lip.
10			Double	Three children in one family had hare-lip.

Of the eleven cases above given, taken from a list of forty-five, two are hereditary, three are attributed to the extraction of teeth, one from lifting the lip to open a gum-boil, three from seeing hare-lips, one from seeing a rabbit, and one from "dressing the head of a boar against the will of the mother!" Thirty-four of the cases are left without explanation.

Even if the correctness of the above facts is admitted, these cases would hardly justify the strong language of the psychological editor, "that the probabilities are thousands of millions to one that the relation between the phenomena is direct."

A careful examination of an extended series of any given form of monstrosity, found in medical and scientific serials and works devoted to teratology, would furnish results no more favorable to the notion of maternal mental influence in their production than is seen in the above table of cases of hare-lip. In Annandale's recent work on congenital malformations of the fingers and toes, among the whole number of cases related, scarcely half a dozen can be found in which ma-

ternal mental impressions were assigned as a cause of their occurrence, and even these are so vague and variable as to excite ridicule rather than inspire confidence in the doctrine.

An extensive investigation of this question, in connection with the general study of monstrosities, embracing a period of many years, in which almost the entire literature of teratology has been examined, has proven most conclusively to my mind, that the ratio of coincidences of alleged maternal emotions and the occurrence of corresponding malformations is very small, indeed, and almost "infinitesimally small" when compared with the whole number of cases of malformations reported in which no connection between the mental condition of the mother and the physical conformation of the offspring could be traced.

In view of all the above facts and considerations, the idea of the existence of anything like law in the alleged results of maternal mental influence in the production of any form or degree of malformation of the fetus in utero, is not only disproven but rendered logically absurd. Such an hypothesis is diametrically opposed to that philosophical axiom which declares that like causes produce like effects.

3. *Are the alleged resemblances of malformed human fœtuses to various objects, as fruits, animals, &c., real or imaginary?*

In the older works on monsters will be found descriptions and figures of numerous monsters resembling various animals, and some which are said to have been made in the image of the devil. In some, the head of an elephant with its long proboscis, is to be seen on the body of a man, or a human body is figured with the head of a dog, a wolf, or a bear, and also many other engravings of monsters consisting partly of human and

partly of animal bodies. In recent and authentic works on teratology no such cases are either related or figured.

The cases which are occasionally mentioned and asserted to resemble certain animals, are found, when carefully examined, to be devoid of all the elements of similarity, the supposed resemblances being the creations of an imagination influenced more by a grotesque fancy than by harmonious analogies.

Having visited many of the large cities of this country for the purpose of inspecting the collections of monstrosities preserved in public and private anatomical and pathological museums, &c., among the thousands of specimens examined, I have never seen a single instance in which a malformed human foetus has borne the least resemblance to any known animal; and in no case have I ever seen any organ or member of the human body which was modified by development after the type of the corresponding part of any of the lower animals. In all cases it was plainly visible, that the vice of conformation was merely an abnormal modification of the part, resulting from arrest or excess of development.

The nearest approach to an animal form which I have seen, is in those human foetuses in which there is an absence of the cranial bones, (acrania, hemicephalia, etc.) in some of which the brain is either entirely wanting, or lies upon the back of the neck or on the shoulders; such cases are sometimes thought to resemble frogs, but, even in the most extreme instances, the human features are readily traced. In the cyclopean monster, the facial organs are so fused on the median line that both eyes are united in a single globe; the nose is not developed, but is replaced by a cutaneous prolongation or proboscis which hangs from above the single median orbit. Such foetuses are said to resemble pigs and even elephants; but do pigs and elephants have only one eye, and that

in the centre of their foreheads? This whole matter of alleged resemblance of malformed human foetuses to any of the lower animals is too ridiculous and absurd to require a serious effort for its refutation. There are no facts to deal with, nothing but groundless assumption, the legitimate offspring and companion of the doctrine of malformation arising from the power of the mother's imagination over the foetus in utero.

4. *Is there no law involved in the development of malformations and monstrosities?*

The science of embryology has been studied with so much assiduity and success during the past fifty years, that the laws of foetal evolution are now nearly or quite as well understood as almost any of the physiological processes connected with the human body. Teratology, which is but a department of embryology, is now enabled to solve many problems relating to the origin of monstrosities which at a former period were entirely inexplicable.

It would perhaps be well, before proceeding farther, to define the term *malformation*, and point out the true nature of these deviations from the normal process of growth. Bischoff has expressed this difference in the following very clear and concise manner:

A malformation is then that deviation of form, affecting either an organism or an organ which is so intimately mixed up with the primitive mode of origin and of development, that it can only happen in the earliest period of the embryonic life, or at least before the term of its completion.

Vogel* has amplified this definition in the following words:

The peculiarity of these malformations, and their essential difference from ordinary morbid changes, are explained by the follow-

* The Pathological Anatomy of the Human Body. Day's translation, Am. ed., p. 434.

ing considerations:—Immediately after birth almost all the organs exist in a condition which, with slight modifications of form, they retain throughout life. All organs, indeed, grow until they are perfectly developed; but this growth is, for the most part, merely a simple augmentation of bulk. A few organs only, as the sexual apparatus and the thymus gland, undergo at a later period comparatively important modifications, either developing themselves more highly, or, on the other hand, disappearing. Indeed, in adults the changes of the body are, in the normal state, almost solely confined to renewal of material (metamorphosis of tissues,) whilst the form of the organs, with very trivial modifications, remains unaltered. The case is different with the embryo and foetus. Here, as the laws of development teach us, the various parts and organs of the body are gradually developed from the simple stroma of the ovum. During foetal life we have, therefore, not merely *nutrition*, as afterwards, but also *development*; and whilst, after birth, pathological influences only affect existing structures, or, at most, give rise to the introduction of heterogeneous matters; previous to birth, morbid influences extend their operation even to the development, so that pathological structures are generated, which differ considerably from those occurring after birth.

The normal evolutions of the several parts of the body are subject to retardation, or arrest, from either of which causes slight vices of conformation, or considerable malformations may result.

The most rational theory in explanation of malformations which modern science has furnished, sets forth that most of them represent certain stages in the normal development of the embryo and of its organs, at which formation has stopped short, or from which ulterior development has ceased to follow the normal type.*

The precise causes which may give rise to such arrests and perversions of development are not satisfactorily understood. They unquestionably consist, in many cases, of foetal diseases, while in others they may be the result of mechanical influence. I am willing to add maternal

* Vide Rokitansky's Manual of Pathological Anatomy: Syd. Soc. ed., vol. i., p. 19.

mental influence as a cause of arrest of normal development in the foetus to the same extent that the late Dr. Allen Thompson, of Edinburgh, has done; the opinion of no man being more entitled to weight than his, as he devoted much time to a thorough and scientific investigation of the whole subject of teratology.

Dr. Thompson* expresses the opinion that sudden or violent changes in the functions of the mother, derangements of the general circulation, nervous affections and other circumstances which tend to disturb the uterine functions, must cause, or be liable to occasion, injury to the foetus or its coverings during pregnancy; and that any violent affection of the mind of a pregnant woman, in so far as it tends to derange the bodily functions, may produce some effect on the nutrition of the child.

The late Prof. Vrolik, of Amsterdam, Holland, entertained much the same opinion, but regarded the action of purely mental impressions as absolutely inoperative in the production of physical deformity of any kind.

I am not aware of any modern author who has devoted special study to the subject of teratology, who is an advocate of the hypothesis of the power of maternal mental influence to produce malformation.

Several embryological principles which are involved in the development of certain malformations have been so clearly and briefly stated by Prof. Dugas† that I prefer quoting his language rather than attempt to give a summary of these points in my own:

1st. That, with the exception of the heart and organs of digestion, the early product of conception consists of two lateral and sym-

* Cyclopaedia of Anatomy and Physiology. Art. Generation: vol. ii., p. 474, et seq.

† Congenital Marks. Southern Med. and Surg. Jr.; copied in the Saint Louis Medical Reporter: vol i., p. 587. 1867.

metrical halves, which subsequently come together and are agglutinated upon the median line so as to constitute one body.

2d. That the process of evolution proceeds from the periphery to the centre; those portions most remote from the median line being formed first, and the others last. Hence, the fingers are formed before the hand, this before the forearm, and the arm proper still later; the ears exist before the eyes, these before the nose; and so also with regard to the trunk.

3d. That any arrest or cessation of evolution before it be completed must result in malformation, corresponding to the stage of evolution at the time of its arrest. If, for example, the hand has been eked out of the body, the process of evolution be arrested, the child will be born with a hand where the shoulder should be, and consequently with neither forearm nor arm. If, after the formation of the ears, head and eyes, there be no further evolution, and the two halves become then agglutinated, the nose and the central portions of the upper jaw will be wanting at birth. Cyclops are thus formed by the union of the lateral portions of the head just at the time when the outer half of each eye has been completed. The arrest of evolution leaving only one-half of each eye formed, these halves have come together so accurately as to resemble one perfect eye on the median line. Cyclops can never have a nose, because of the arrest of evolution, and of the union which has taken place before it could be formed.

4th. The failure to unite the two halves at any point of the median line must leave fissures where none should exist. Hare-lips and cleft palates are thus produced.

5th. The process of evolution may be excessive as well as incomplete; when excessive in certain portions of the capillaries, these blood-vessels, which are, in the normal state, too small to be seen with the naked eye, now become so large as to carry red blood, and to impart to the locality (if in the skin) a corresponding degree of redness. This is the way in which marks are formed. An excess of evolution may also produce supernumerary fingers, or other appendages.

With these principles in view, we must be prepared to admit that, if the emotions of the mother ever affect the *fœtus* so as to induce deformity, this must be done at the precise time at which the deformed part is undergoing evolution; for the difficulty would much increase if we had to presume that, after evolution had been completed, the emotions of the mother would destroy it and reproduce an anomalous one in its place. In the case of hare-lip, for

example, which is one of the simplest deformities, resulting from a failure of timely agglutination of the parts, to suppose it to be induced by an emotion occurring after the formation of a healthy lip, would be to admit the possibility of the destruction of normal tissues and the extension of skin over the edges of the newly-formed fissure.

One of the most hideous deformities, and one unfortunately too common, is that which results from an arrest of evolution before the development of the brain and cranial bones. The child is then born with neither brain nor head proper, while the face is fully developed, which gives it a monstrous appearance, not unfrequently compared to a toad or a bull-frog. Would it not be taxing the credulity even of a fanatic in such matters, to suggest that any emotion of the mother could induce the destruction of such extensive and important organs after they had been formed? The cause, whatever it may be, that gives rise to such a deformity, must be operative before the evolution of these portions of the body; for it clearly results from an arrest of evolution.

John North, Esq.,* in speaking of congenital maculæ made the following observations:

Nævi, depending upon an anomalous condition of the blood-vessels, are red, violet, or black; those which are red become deeper from mental emotion, heat of the skin, or any circumstance capable of producing a blush on the surface of the body. These vascular nævi are generally elevated above the surface, and may appear in every organ, and of every form.

These vascular nævi increase by heat, and of course they are affected by the warmth of summer; at that season they are redder than at others, and hence the popular belief that they resemble certain fruit which has been longed for by the mother, and that they follow the laws of its growth. This is all nonsense. It is true that these nævi become redder when the fruit is ripe; but that is because a greater determination of blood takes place to the surface of the body during the warm weather, and thus the nævi become elevated, and present a more turgid and red appearance than at other times.

Congenital melanotic stains upon the surface of the skin vary greatly in situation, form, and color, and sometimes they are covered

* *A Lecture on Monstrosities*, delivered at the Middlesex Hospital School of Medicine, February, 1840. *London Lancet*, March 7, 1840, p. 857, et. seq.

with hair. They are often, by the public, said to resemble some animal by which the mother has been frightened during her pregnancy. But how is the evidence obtained upon which this foolish belief is founded? A woman is delivered of a child, having upon the surface of its body a dark stain, perhaps covered with hair. The attendant gossips assert that it is like a cat, a rat, or a mouse. The mother is asked if she has not been frightened by either the one or the other of those animals during her pregnancy. If she answer in the affirmative, the parties are, of course, satisfied. If she reply in the negative, she is asked by what she was frightened, or what she saw while she was with child. And you may easily imagine that such a train of inquiry must lead to the wished-for conclusion that the stain upon the child resembles something—no matter what—which the mother saw in the course of her pregnancy. During the French revolution a woman was delivered of a female child which had a dark spot upon its arm. This was converted into a very correct resemblance of the cap of liberty; and, the important fact being communicated to the government, the woman obtained a premium for having brought forth a child with a revolutionary emblem on its arm!

In this connection I will relate the following case as an illustration of the very ready mode in which parents and others attempt to explain the origin of "mother's marks;" which term, by the way, is objectionable for the reason that it implies that the marks are derived from the mother: the continued employment of the expression will tend to perpetuate the error; therefore the term "congenital" should always be substituted in place of "mother's," whenever these spots or marks are alluded to, either in speaking or writing.

This case was related to me by a medical friend, since this article was partly written, it having occurred in his practice quite recently.

A few months since, while in attendance upon a case of natural labor, which resulted in the birth of a well-developed child, the nurse called his attention, after having washed and dressed the baby, to a red spot above one of its eyes which she said was a "mother's

mark;" the mother having been informed of the fact was interrogated as to the probable cause, whereupon she promptly declared that in the early months of her pregnancy she cut her finger and touched her forehead above the eye corresponding with the one "marked" in the child, and when she saw in a mirror the blood-spot on her brow she at once spoke of its resemblance to a cherry! This was considered to be a satisfactory explanation, and the relation of cause and effect was apparently unquestionable. The following morning, however, the "mark" proved to be a small coherent coagulum of blood, which bore an equally striking resemblance to a cherry as that on the mother's brow had done several months previously, and was easily removed by the soap and water used in the second washing of the immaculate baby!

The following remarks were made by Dr. Detmold, at the discussion, previously referred to,* before the N. Y. Academy of Medicine.

I suppose there is hardly a surgeon who has not seen a large number of cases where deformities have been attributed to influences of the same kind. I allude to those red spots upon the skin, those small aneurisms by anastomosis, which are attributed by the mothers of the children to this and to that cause. I recollect fifteen years ago I was called on by a distinguished obstetrician, to perform an operation upon a child's cheek. He told me that the mother had been frightened by a leech, and that of course the child had a leech upon the cheek. It was simply an aneurism by anastomosis, with as much resemblance to a leech as to an elephant. The imagination goes a great way in these cases. The family physician is called under such circumstances, but does not like to dispute the cause of the trouble, and passively yields to the explanations given by the parents. Gradually he himself begins to be persuaded that the resemblance between the cause and effect is greater than it is. This idea gradually grows upon him, and he becomes more or less a firm believer. I am astonished to find that

* *Bulletin N. Y. Acad. of Med.*, vol. i, p. 364, Jan., 1862.

there is such a large number of intelligent men who believe that there is a certain influence exercised between the mother and child; this is even the case with some professional men. In all the cases that I have seen, where there has been anything of the kind imputed, I have never met with a single instance where the satisfactory relation between cause and effect could be made out.

That malformations and monstrosities are not the productions of chance, or the results of maternal whims or caprices, or of the mental shocks from fright, or even, perhaps, of physical changes induced by mechanical injuries, is proven by the fact that every known form of malformation or monstrosity has been so many times repeated or duplicated that they are perfectly well known to teratologists, by whom they have been classified and described with as much accuracy and scientific skill as are objects in any department of natural history: any anatomical museum contains the counterparts and duplication of the monsters found in every other. They are not innumerable or endless in variety, and never present a part or organ not peculiar to the species which is the subject of the malformation. They are, as has been previously said, merely modifications of the normal form resulting from arrested, retarded, excessive, or perverted development.

The monstrosities observed in the human subject are not in any manner different from those found in the lower animals. In short, it may be said that all the vices of conformation, all the structural deviations from the normal type, which are called malformations and monstrosities, from the slightest to the greatest, constitute a continued series, the difference in the several links of the chain consisting in the simple matter of *quantity* and not of a difference in *kind*.

The development of double-monsters is now so well understood that it furnishes the most positive evidence, and the most unanswerable argument, that embryonic

laws are involved—and though embarrassed, yet not violated—in the production of this class of monstrosities.

It is now positively known, *first*, that they are not *united-twins*, as they have been improperly called, since they never result from the accidental adhesion or fusion of twin embryos in consequence of the absence of the normal septum formed by the layers of the two chorions, which erroneous doctrine has been taught by the late Prof. Chas. D. Meigs, in his "System of Obstetrics," and by others who have bestowed no special study to the science of teratology. *Second*, united-foetuses do not result from the fecundation and development of a double-yolked ovum. A double-yolked egg consists of two distinct eggs (yolks) enclosed in a single envelope: the surrounding albumen and the membranous envelope, the calcareous covering or shell, are not essential parts of an egg.

It has been shown by various embryologists, but particularly by Prof. Panum, of Kiel,* that the fecundation and incubation of double-yolked eggs do not result in united-chicks. The direct experiments of Prof. Panum, who procured over eighty double-yolked eggs of domestic fowls, and placed them in his hatching apparatus produced the following results:

A considerable portion of the double eggs could not be made to hatch; when the vascular area of either or both yolks was developed on the proximal surface, death would result in consequence of contact and pressure arising from the constantly increasing size of the yolks, which takes place as incubation progresses. Of those

* Untersuchungen über die Entstehung der Misbildungen in den Eiern der Vögel, von Dr. P. L. Panum, Prof. der Physiologie an der Universität zu Kiel, mit 107 Abbildungen auf 12 Tafeln, pp. 260, Berlin, 1860.

which he succeeded in hatching, two distinct and separate chicks were produced, which, like other twins, were of the same or of opposite sexes.

In one case a double-egg produced a single chick from one vitellus, and a double-monster chick from the other. This corresponds with what has been observed, in at least four cases, in the human subject, in each of which the mother has been delivered of a double fœtus, and at the same accouchment of a single fœtus. As in all cases of united-fœtuses, so in these, unity of sex was found in the two individuals of the double-monsters, while the additional single fœtus was, in two or three of the cases, found to be of the opposite sex.

The direct observations of several embryologists, among whom may be mentioned Wolff, Von Baer, Reichert, Allen Thompson, Panum, Dareste, and especially the recent researches of Lereboullet, have proven that every form of the double-monster (united-embryo,) is the product of a single ovum, on the vitelline membrane of which two primitive traces are developed instead of one; and that according to the proximity or remoteness of the two germinal traces, and their relative positions in regard to parallelism, will result the degree of duplicity and the extent of the fusion of the double-fœtus.

This is not the place to enter into the details of this interesting subject; all the facts and references to authorities will be found in my essay on *Diploteratology*, to which I have previously referred.

In accordance with the facts above stated, we find that double or united fœtuses, both human and animal, are developed in obedience to three invariable laws.

1st. The law of unity of sex.

In no instance among over five hundred cases of human double-monsters which have been examined, as

well as numerous cases occurring among the different orders of the lower animals, has a single exception to this law been found: both individuals of a double-foetus are either males, or both are females.

2d. The law of homologous union.

In some instances of retarded or arrested development in one of the individuals of a double-foetus, resulting in an unequal balancing of parts, this law, on a casual examination, would appear to have been violated; a more careful investigation of the several stages of development of the unequal (so-called parasitic,) monster has proven that the union was homologous in the early embryonic periods, although apparently not so in the later foetal stages, or after a considerable time had elapsed subsequent to birth, during which time the inequality constantly increases. In the more complete and symmetrical cases of double monstrosity, in all degrees of duplicity, this law is seen to operate as perfectly in the union of the two fetuses as it is in the union of the two bilateral halves of a single foetus in normal gestation.

3d. The law of right and left symmetry.

I have found no exception to this law in all the cases of double-monsters which I have examined; and I believe that in every instance in which a careful description of a double-foetus has been recorded, or in which a thorough examination shall hereafter be made, it will be found that right and left symmetry exists, that the corresponding viscera of the right and left bodies of a double-foetus will bear the same relation to each other as the right and left symmetrical members and organs of a single body do to each other; for example, the hands, feet, eyes, ears, &c. If the double-foetus has two hearts they will be right and left, their apices will converge to the median line of fusion of the compound-body: the same

will also be found true of the stomachs, spleens, livers, etc.

I cannot pursue this subject farther in this connection: it has been dwelt upon thus far for the purpose of showing that this class of monsters is developed in strict conformity to embryological laws; the fusions, malformations, and absence of parts being due to *embarrassments* arising from the too close proximity of the primitive traces, in consequence of which the evolution of the parts in the line of contact is rendered more or less incomplete, and fusion necessarily takes place. The whole process being under the control of a single germinative law, symmetrical or homologous development and fusion results.

As to the cause of a double-development in a single ovum, no explanation can be given for it any more than one can be rendered for the occurrence of double fruits, (apples, pears, plums, cucumbers, &c.,) which every one has occasionally seen, or of four or five-leaved clovers, or any other development in excess of typical forms.

Notwithstanding what has been stated above, the literature of double-monsters furnishes the history of numerous cases in which maternal mental influences have been assigned as the cause of united-twins, as they are commonly called.

In one case, where the union was by the foreheads, it is stated that the pregnant woman was accidentally struck upon her head by the corresponding part of another woman's head, and hence arose the head-joined foetuses.

In another case, which occurred in my own practice, the mother explained the development of a two-headed foetus, by her having attended a circus when two months pregnant, and seeing the gymnast whirling upon the trapeze she was profoundly impressed with the appearance of two heads upon his shoulders.

A third case was communicated to me, in which the foetus had a single body and a double head, so fused as to show two faces, four eyes, two noses and two mouths, and only two ears, (Diprosopus.) The *cause* assigned was that a few weeks before the mother became pregnant she saw two children placed side-by-side in a single coffin, and as she gazed upon them, being overwhelmed with emotion, (one child being her own and the other her sister's, both having died at the same time and in the same house, of scarlet fever,) the heads and faces of the babes seemed to her to blend into one, and this strange fusion of the heads made a lasting impression upon her mind, which continued through her pregnancy, and resulted, as she avers, in the two-faced foetus; which is described and figured in my essay on Diploteratology as case No. 118, fig. 71.

Certainly, according to Prof. Hammond's reasoning, the relation of cause and effect would seem to be unquestionable in these cases; yet numerous human cases, identical in kind, have previously occurred, and also many cases among the lower animals, even reptiles and fish, [where no mental explanation can be given, and where the psychological doctrines of Prof. H., accommodating as they are, would certainly not apply.

I must conclude this portion of my paper, by saying, that I have never seen a malformation or monstrosity which could not be explained by the doctrine of retarded, arrested, or excessive development of the embryonic elements which belong to the normal type of the species which was the subject of the malformation; and in no case, would the doctrine of maternal mental influence aid in explaining any of the anomalies of organization which have occurred in a series of cases in man and the lower animals.

If maternal mental impressions were capable of ex-

ercising a destructive and constructive power at any stage of embryonic development, as is claimed by those who advocate the affirmative of the question under consideration, then we shall expect to see genuine reproductions of the various parts of diverse species which had given rise to the mental impressions exercising the modifying power. The truth is no such specific metamorphoses have ever been seen; a human head was never replaced by that of a beast, bird, or fish; hair was never replaced by scales, or feathers; arms and hands by wings, or fins; etc., etc. All assertions to the contrary are founded on fancied resemblances. I have in my possession a knot covered with bark, taken from the body of a beech tree, which bears the exact image of a human head, having a well-formed nose, mouth, lips, eye and ear, cheek and chin. Many objects in nature, roots, stones and even the outline of mountains, have exhibited striking resemblances to men or animals in whole or in part; and nothing is easier than the creation of fancied resemblances by one possessed of a fruitful imagination; and certain it is, this mental endowment has been exercised to a marvelous degree by those who have regarded vices of conformation as the result of maternal mental impressions. While I deny that the mother's mind has any power to produce physical changes in her offspring during gestation, I am free to admit the unlimited power of her imagination in the explanation of abnormalities *after* the period of gestation has terminated.

Is it not illogical, nay absurd, to attribute the occurrence of human anomalies of organizations to maternal mental emotions, when it is impossible to assign any such cause for the production of a corresponding series of malformations occurring in the lower animals, —viviparous and oviparous—and also a series of

strictly analogous cases of retarded, arrested, perverted and excessive developments found in the vegetable kingdom?

Through what medium is it assumed that the mother's mind is brought to exercise its power upon the embryo or foetus in her womb?

It now remains to enquire through what medium or media it is assumed by the advocates of this doctrine the mother's mind operates upon the foetus in utero. If it had been proven to be a fact that the mother's mind can exercise a power to arrest, suspend, pervert or entirely change the laws of embryonic development, it would then become a curious and scientific inquiry to determine the mode of its operation, and the medium through which it is communicated to the embryo or foetus in utero: but, since this is by no means proven, and is merely an assumption founded chiefly on traditional superstition, and the whims and caprices of nervous and apprehensive gestating women, and the "unquestioning faith" of a portion of the medical profession who have devoted no special study to the subject of teratology, and who have more confidence in the power of maternal imagination than they have in the stability of the laws of organization; since such is the case, it is proper in this place to enquire, if it is rational to suppose that the development of the foetus in utero is left subject to a mental and emotional power capable of entirely destroying the organic laws which govern the evolution and growth of the several parts and organs of the foetus; or whether the Creator has been less careful in guarding the development of the human embryo, in common with that of all viviparous animals, than he has the embryos of the oviparous orders.

Viviparous and oviparous development differ only in this respect: in the latter, the ovum is fecundated, and

being supplied with all the necessary nutritive elements surrounding the vitellus, (which constitutes the ovum proper,) it is expelled from the ovary and oviduct, and undergoes the process of incubation or embryonic development outside of the body of the parent; while in the former, the ovum after fecundation passes from the ovary through the oviduct called the fallopian-tube, and, instead of being carried out of the body, becomes attached to some portion of the interior of the uterus, which is but a safe nidus or nest, a sort of hatching oven in which the development takes place. The only communication existing between mother and child being through the medium of the blood, which passes indirectly through the placental sinuses and umbilical cord. No nerves have ever been traced in the funis by the most skillful anatomist, not the most delicate filament has ever been seen in it with the naked eye, or even by the aid of the lens.

It is not essential that the ovum should enter the uterus in order that development shall take place; if it makes a lodgment in the fallopian-tube gestation goes on almost as perfectly, as numerous cases of tubal or extra-uterine pregnancy have proven. In the marsupial animals, development only proceeds to a very limited extent when the foetus is transferred to the pouch or external womb. The Creator has arranged, for wise and prudential purposes, a plan of incubation within the body of mammals and out of the body for other animals, the products of each of which modes are, doubtless, equally independent of mental influences after fecundation of the ova has occurred.

The doctrine of Harvey, *omnium vivum ex ovo*, is now universally accepted.

Some writers have claimed that the mother's mental impressions are communicated to the foetus through the medium of nervous filaments; which were assumed to

be so delicate as to be imperceptible to the human eye, even by the aid of the microscope. It is needless to attempt to reply to an assumption so entirely gratuitous and improbable.

It is maintained by others, and in this number Prof. Hammond is included, that maternal impressions are conveyed to the foetus through the medium of the blood. Prof. H. says, in the essay so often referred to, "within the womb a new connection is set up between the ovum and the mother—that of the blood; and it is through this medium that all impressions from her mind to her offspring must pass." He also refers to the physiological fact that the blood is not transmitted directly from the mother to the foetus, nor returned from the foetus to the mother, but, that it passes indirectly through a placental membrane by the process of endosmosis and exosmosis.

If the blood is assumed to be the medium of communication from the mind of the mother to the offspring in her womb, and if it should be conceded, for the sake of argument, that mental emotions can be transmitted through the medium of the blood-globules or the liquor sanguinis, notwithstanding the blood is literally strained through a membrane by the process of exosmosis before reaching the foetus, is it reasonable to suppose that a given mental impression capable of producing a malformation, thus transmitted, in a case of plural conception would induce abnormal development in one foetus, and be entirely inoperative in the other twin foetus?

The fact of malformation having occurred in one twin, coincident with perfectly normal development of the other, has been observed in numerous cases. In the lower animals which produce several young at a birth, it frequently happens that one only, (pig, pup, or kitten, as the case may be,) will be malformed while all the

others of a litter are perfect. Several cases have already been referred to, in which a woman has been delivered of a well-formed single child, and also of a double-monster child at the same accouchement. The doctrine of malformations arising from maternal mental influence transmitted by the sanguineous circulation fails to explain phenomena of this character, and hence must be regarded as untenable, to say the least of it.

Altogether the most ingenious and plausible attempt to surmount the difficulties connected with the doctrine of mental influence as a cause of malformation, will be found in the seventh volume of the *Obstetrical Transactions*, (p. 88, et sequel,) in a paper by Dr. Alfred Meadows, physician to the general lying-in-hospital of London, entitled "Case of monstrosity, with remarks on the influence of maternal impressions on the foetus in utero," which paper was read and discussed before the Obstetrical Society of London, at its meeting, April 5th, 1865. For the sake of giving the advocates of the affirmative of this question the benefit of the latest theory of the modus operandi of maternal mental impressions, I will transcribe a considerable portion of that part of the paper which relates directly to this point.

I know it is the fashion rather to ridicule the idea that the mind of the mother can any way influence the foetus as regards its formative development, and I do not anticipate that any remarks of mine will settle this much-vexed question; but, if I am not mistaken, much good may result from a formal declaration of the opinion of this Society. I do not hesitate to avow my conviction, formed after no little thought upon the matter, that the mind of the mother can and does sometimes so interfere with the ordinary processes of nutrition and growth in the foetus, as variously to check or modify its development in whole or in part, and thus to produce deformities or monstrosities. At the same time I would have it understood that, while accepting the general principle, I by no means pledge myself to identify all the stories which are given by mothers with the effects which are said to have resulted therefrom.

But it does appear to me that there are facts and statements recorded by competent witnesses which it is idle to laugh at as old women's fables, and which are really more scientifically explained by accepting, than by rejecting, the theory in question.

* * * * *

So far as I know, the great, perhaps with many the only, objection to the doctrine here contended for is, the absence of any proof of nervous connection, anatomically, between the mother and foetus; it being held that without this connection there can be no transmission of mental impressions, and therefore no tangible results from them. But surely this is a very materialistic view of the question, and, if accepted, would compel us to believe that mind is limited in its operations to the exact boundaries of the nervous system; in other words, that it has a material form corresponding to, and confined by, the nervous centres and their multiform ramifications. Such a belief is utterly incompatible with what is known of the relations of mind to matter, and of the power of mind over the body. These force upon us the conviction that mind does in some mysterious way operate across matter, something in the same way as the electric fluid will pass across a certain space between two conductors.

Animal electricity, we all know, exercises a most potent influence over the nutritive functions; primarily, no doubt, this electricity acts through nerves: but, just as ordinary electricity will pass across space, the extent of the latter being determined by the tension, as it is called, of the former, so animal electricity will equally traverse the space between its proper nervous conductors, and so act upon the intervening tissue and modify its nutritive processes. It is only in this way that we can explain the known influence of mental impressions on tissue which are known to be destitute, or nearly so, of nerves. And as it is known that mind acts principally by a sort of electrical excitation, we can readily understand somewhat, at least, of the nature of the process by which mind acts upon matter; we seem, too, to get a glimpse of the way by which, as I humbly suggest, strong mental impressions may produce equally strong electrical changes, and so perhaps lead to great and abnormal results in the nutritive processes. No doubt also the fact before alluded to, viz.; that strong currents will pass through space from one conductor to another, helps to explain how, in the absence of any direct nervous connection between one tissue and another, strong mental impressions may thus act upon them. The applicability of such reasoning to the case of the mother and the

fœtus in utero is apparent, and I venture to think that if the mind of the mother can exercise any influence on the fœtus in utero in the direction here pointed out, it must be in some such way as this; the only requirement which seems really essential is, that there should be some kind of material along which the mental, nervous, or electrical influence may be carried; and if the latter be, as is probable, the correlative, as it were, of the mental force, it does not, I think, require much argument to prove that, in cases such as that we are now considering, this force may easily reach its destination and the scene of its future working, either along the umbilical cord, or even across from the inner surface of the womb at any point to the nearest surface of the child. Indeed, I hold that the spiritual part of individuals, so far as it can be said to have shape at all, is only bounded by their external physical lineaments, and certainly includes all and every part within those boundaries, as well the gravid as the virgin uterus.

* * * * *

Further, it has been objected to the view here taken that if the assumed cause, maternal imagination, were really the efficient agent, the resemblance between the idea and the fact ought to be greater than it often is. I do not think the objection a valid one, because the amount of deformity only shows the degree to which force has, as it were, conquered matter, and how far it has failed of its object; it proves nothing more.

Great stress has also been laid on the fact that during the earlier weeks of fœtal life the relation between the fœtus and the parent is one of simple contact; hence it is argued that no mental impression could reach it to produce the effects described, and yet many of these deformities must have commenced about this period. I think I have already answered part of this objection; and as to the latter, of course it is not pretended that mental impressions are the only, but that they are an occasional, cause of bodily deformity.

Again, it is urged that the fact that monstrosities occur among the lower animals is proof against this theory, because it would be ridiculous to suppose them to be the sport of mental emotions. I can only say, in reply, that I have no more doubt of the existence of mental emotions in the lower animals than I have in the case of man; and I think any one who has studied the lives of domesticated animals, and has watched them during the period of pregnancy, must have seen how very emotional they are, and what solicitude and care they often exhibit at such times.

Until, therefore, such other explanation is offered of the many

cases of monstrosity which crowd obstetric literature than that they are mere freaks of nature, I for one am prepared to accept the doctrine that among the many causes of bodily deformity the influence of the mind of the mother deserves a by no means unimportant place.

This hypothesis, which assumes that maternal mental impressions "pass across space," that "this force may easily reach its destination and the scene of its future working, either along the umbilical cord or even *across from the inner surface of the womb, at any point, to the nearest surface of the child*," has the merit of novelty and boldness, and although it may be likened to *jumping* at a conclusion, it is certainly a very *direct* way of cutting the Gordian knot.

The objections to this theory are the same as we have seen apply to all the other mental-emotion hypotheses which have been proposed. If strong mental emotions could be thus transmitted to the foetus in utero, and if matter and the organic laws of embryological development could be thus "conquered," obstetric literature would be much more crowded with monstrosities than at present, and the relative proportion of normal to abnormal births would be completely reversed. Dr. Meadows' theory does not furnish a satisfactory explanation for any known form of monstrosity; and will not at all apply to malformations which occur in plural conception where one foetus is normally and another is abnormally developed. The selection of one embryo or foetus among a half-dozen or more in the case of domesticated animals, no matter "how very emotional they are," is certainly quite incomprehensible, to say nothing of analogous malformations which occur among egg-laying animals, such as birds, and cold-blooded reptiles, and even fish, which cannot be regarded as being very highly emotioned.

It would perhaps be well to mention in this connection that in Dr. Meadows' case of monstrosity, which gave rise to the observations from which I have so freely quoted, the mother assigned as the cause of the malformation of her child, the circumstance "that during the early weeks of her pregnancy she was greatly horrified by being shown some of Aristotle's plates, in which were exhibited some deformities resembling this, and specimens of other monstrosities."

It does not, however, appear that she was particularly "horrified" by the picture which most resembled her own malformed child, which, by the way, was by no means as horrid as most monsters, being one of the commoner forms of arrested development, consisting in an absence of the abdominal walls, and defective genito-urinary organs, associated with *atresia ani*. After quoting the opinion of Prof. J. Y. Simpson in explanation of the faulty development, and acknowledging that this view of the case "appeared quite consistent with all that is known of foetal life," Dr. Meadows then proceeds to the consideration of the question of the power of the mother's mind over the development of the foetus in utero, and expresses the opinions above cited.

When it shall have been clearly proven that a pregnant woman has been more or less "greatly horrified" by seeing some specific form of malformation, or even a representation of one, and that the mental shock has, in any manner, been transmitted to the embryo in her womb, and has resulted in a reproduction of the same kind of malformation, then will it be time to investigate the matter scientifically, and endeavor to ascertain how far the universality of the fact can be established; but, until well-authenticated facts, sufficiently numerous to remove the suspicion of mere coincidence, have been obtained, it will be far better for the advancement of

science for medical gentlemen to direct their inquiries and researches to the "pathology of foetal life," which hopefully offers a fruitful field for exploration.

It now remains for me briefly to indicate, as far as our present imperfect knowledge of them extends, the causes which give rise to abnormal development. The only rational view which can be entertained of the causes of nearly all the forms of monstrosities is that which refers them to pathological influences, perfectly analogous to those which produce morbid changes in the body subsequent to birth. A variety of causes of this character may be concerned in determining abnormal development, or the same cause operating with different degrees of force may give rise to a variety of dissimilar vices of conformation.

Vogel, in his work on pathological anatomy, has given a very sensible and concise account of the causes which may be assigned for abnormal embryological development.

1. *Abnormalities of the generative matter of one or both parents.*

This is rendered obvious by the fact that children are frequently seen to possess the peculiarities of their parents, to inherit certain malformations from either the father or the mother. Cases of this kind are by no means infrequent, united fingers or toes, and extra digits and several other varieties of irregular formation are known to be hereditary. To this class may also be referred the cases in which several children, whose parents present no peculiarity, suffer from the same malformation. Vices of conformation transmitted from the parents to the children must be through the medium of abnormal generative matter.

2. *Abnormalities of the maternal organism.*

It is probable that *arrest of structure* is frequently

due to pathological alteration in the fallopian-tubes; in the uterus; or to bodily diseases, either functional or organic, of the mother. Such causes probably operate to disturb, interrupt or entirely arrest the development of some portion or portions of the foetus. This would probably account for the fact that the same female has been known to produce a succession of malformed offspring.

3. *Diseases and abnormal states of the membranes of the ovum, and of the umbilical cord.*

Vogel says, (op. cit.) "These generally induce an arrest of formation, by disturbing the process of development, and we may point out individual deviations from a normal state, which can with much probability be regarded as causes of certain malformations. Thus, shortness of the funis and deficient union of the vessels forming it into one common cord, favor the origin of abdominal fissures, and of congenital umbilical hernia; or if the funis be of disproportionate length, it may coil around the extremities, constrict them, and thus render their nutrition defective, or even cause their amputation. Union of the foetus with the amnion may likewise give rise to malformations, through pressure or tension." Several cases of this nature have been collected by Henle, Simpson, and others.

4. *Diseases, and mechanical injuries of the foetus.*

That mechanical injuries or external disturbing influences of a physical character may modify or arrest the development of the embryo is almost undeniable. The direct experiments of Geoffroy St. Hilaire, of Valentin and of Panum, have all proven that by various mechanical means to which hen's eggs are submitted during incubation, the development of the embryo is partly interrupted and partly modified in such a manner as to give rise to malformations. (*Vide* Vogel, and Panum, op. cit.)

Kicks, blows and falls of pregnant women have often resulted in some form of anomoly of organization, particularly hemicephalia or acrania.

Of diseases of the foetus which are capable of causing malformations, we at present recognize *dropsical accumulations of water in its various cavities*—no doubt one of the most frequent causes of *hemicephalia, spina bifida, abdominal fissures, and hernia umbilicalis congenita*; *inflammation of certain organs* at an early period, which through the agency of fibrinous effusion may give rise to union, or even destruction and atrophy of certain parts; and *nervous diseases*, inasmuch as they cause spasmoid contractions of individual muscles or muscular groups, and in this way give rise to deformities of the trunk and extremities, (curvatures.*)

The several influences which have been briefly considered in the preceding paragraphs, are, doubtless, those which must be regarded as the most frequent, the most important and the most rational causes of malformations. There may be other causes whose influence is too subtle and too intangible to determine, and perhaps some which well-directed researches may yet bring to our knowledge. Imperfectly as we now comprehend the etiology and genesis of most of the anomalies of organization, it is an encouraging fact that more rational views are being entertained as the science of embryology and researches in pathological anatomy are cultivated by medical men.

The following is a summary of the conclusions at which the writer has arrived by his inquiries, observations and reflections on this subject:

1. That traditional superstition has perpetuated the

* Vogel, *Path. Anat.*, Henle, *Zeitschrift f. ration. Mediz.* Bd. II, s. q.

notion that malformations are the result of maternal mental emotions.

2. That the medical profession is in no inconsiderable degree responsible for the existence and continuance of this popular error.

3. That various intense mental emotions are common with gestating women, and apprehensions of malformation of their offspring exist in the minds of a large portion, yet abnormal births are extremely rare.

4. That there is nothing like law in the alleged results of maternal mental influence in the production of malformations.

5. That the occasional apparent relation of cause and effect is due, in most instances, to accidental coincidences, which would be far less frequent if the facts could be obtained *previously* instead of *subsequently* to the birth of the child.

6. Coincidences are not sufficiently numerous and authentic to warrant a rational belief in the origin of monstrosities from the perturbed emotions of the mother's mind.

7. Like causes produce like results; whereas we find that in a series of cases of any special variety of malformation, mental emotions, arising from a considerable number of dissimilar objects, even of the most diverse character, are assigned as the cause.

8. In a large proportion of the cases of malformation no mental or even physical explanation is offered by the parents or friends.

9. There is no relation between the number and character of the mental emotions and apprehensions of pregnant women and the actual frequency and variety of malformations.

10. That some of the assumed causes are alleged to have operated upon the embryo or foetus subsequently

to the normal period for the evolution of the part which is found to be the seat of the malformation, thereby implying a destructive as well as a metamorphosing power in the mental emotion !

11. That the alleged resemblances of various congenital maculae to fruits and animals, are either accidental, as in the case of rocks, the outlines of mountains, and the forms of clouds, which exhibit the profile of the human head and face; or they are the result of pure imagination and fancy on the part of the observer. The same is true of the alleged resemblances of more important parts or members to the corresponding parts of animals.

12. Malformations identical in kind and in degree recur, again and again, in the human subject, and admit of a systematic classification. They are not infinite in variety, but definite and distinctive.

13. Every form of malformation and monstrosity which has occurred in the human subject has had its exact morphological counterpart in the lower animals, as well in the oviparous as in the viviparous.

14. The vegetable kingdom produces analogous anomalies of organization to those found in the animal kingdom, viz.: dwarfish, gigantic, distorted and double malformations.

15. The only rational and scientific explanation of abnormal development is to be sought in the realm of pathological histology. The pathology of foetal life presents a rich field for hopeful research.

16. Monstrosities are not the result of *violations* of embryological or physiological laws; they are the product of *embarrassments* to normal development.

17. Vices of conformation and monstrosities are due to either retarded, arrested or excessive development.

18. That in plural conception it is particularly absurd to suppose that a mental emotion can be conveyed to

one foetus in the womb and be inoperative upon another, whether the emotion be transmitted through the medium of blood, by undiscovered nervous filaments in the funis, or by a sort of animal electricity or magnetism directly across tissues.

19. The development of united-embryos, or double-foetuses, is now positively known to follow definite laws, including homologous union, unity of sex, and right and left bilateral symmetry.

20. Monstrosities never consist of parts or organs which do not belong to the species which is the subject of abnormal development.

21. Monstrosities may arise from either abnormalities of the generative matter of one or both parents, abnormalities of the maternal organism, or from diseases and abnormal states of the membranes of the ovum and of the umbilical cord.

22. That the time has fully arrived for the explosion of the popular error which attributes anomalies of organization to mental emotion.

23. That it is the duty of the medical profession to endeavor to correct this popular error by teaching the people the absurdity of their "unquestioning faith" in such an inadequate power to pervert or destroy the laws of organic development.

If this essay shall serve to awaken a greater interest in the subject of which it treats, tend to weaken if not destroy the "unquestioning faith" of medical men in popular superstitions, increase their knowledge of, and strengthen their confidence in, the laws of organic development, and, indirectly, allay the groundless apprehensions of sensitive and imaginative pregnant women, the object of this effort will have been accomplished, and the writer most amply rewarded for the time and labor expended upon it.

CAPAX, OR INCAPAX?

An issue of a singular character was lately tried in Fulton County, New York. *Antiquus*, so to call him for our purpose, is a man of eighty-two years and more, possessed in fee of a farm of three hundred and thirty acres, worth at least ten thousand dollars on a sworn valuation. He chooses to live in a secluded, ragged, and dirty way; keeping his own domicile,—a sorry specimen of housewifery; sitting alone by his own hearth-stone; reading or thinking himself to sleep in his paternal arm-chair; and tumbling out occasionally, to the hazard of his person, when he becomes somewhat somnolent over a tough chapter of the *Apocalypse*, which is the main study and solace of his declining years. Thus living, and like a celebrated literary worthy, “having neither wife nor children, good or bad, to provide for,” a grand nephew of his not long since took it into his head to suspect that *Antiquus* was allowing his affairs to get into a bad way, to the future detriment of the inheritance; which, as he was interested, in case of intestacy, to the valuable fraction of one-seventieth part, he naturally thought might be better cared for under his own or other guardianship. So he applied for an inquisition to ascertain whether his venerable relation was *capax* or *incapax*,—in the words of the writ, “incapable of managing himself and his affairs.” The County Judge, after an unsatisfactory inquisition in the common mode; wherein, out of twenty-four jurors summoned, one was lacking, and only twelve out of the twenty-three signed the return, eleven refusing; ordered a proper issue to be made, and due notice to be given for the trial of it, before a petty jury drawn from the general list of the whole county. As *Antiquus* had

always managed his own affairs after his own mind and fashion, with a success and gain satisfactory to himself; and as he thought he was well enough to do in the world; he naturally felt indignant that, with all his experience, he should be called in question, at his time of life, by a young aspirant to part of his wealth, as to his ability to do so a little while longer: probably intending not to end his days short of the hereditary period of one hundred and four years, which the paternal example authorized him to expect. So, being advised of the proposed proceeding, and determined to shun all observation of himself or his affairs, he stuck a case-knife firmly over his door-latch, and thus fortified his secluded dwelling against all inquisitive approaches.

As it was deemed important by his persecutors that suitable medical evidence should be had to justify their proceedings, an expert doctor was invited to make a personal examination of the recusant old man. With a little posse, this expert ventured to the rustic castle of *Antiquus*, (every man's cottage is his castle, by the gracious courtesy of the common law and Lord Chat-ham,) which he found duly barred and bolted; but no warder was in attendance to be summoned. After various ingenious and fruitless attempts at a parley, the earnest expert finally succeeded in effecting a forcible entrance,—a pious burglary of the second or third degree, strictly amenable to the statute,—by thrusting his arm through a window, and with a rake, or other offensive long-reaching weapon, detaching the protecting case-knife, on the strength of which, and of the law, *Antiquus* so vainly depended. He found *Antiquus* in a very rudimental condition; stealing out, half-clad, from the shelter of an antique hereditary clock, which, having been his hiding place and protection in his freaks of childhood, he had naturally fled to as a friendly refuge in

his declining years. A glance at him and his plight, at once satisfied his obtruding visitors of his lack of competency and common sense; for how could a man with sufficient means for the enjoyment of life like other folks, choose to live as he was living, an eremite for seclusion, rags, and dirt, and an anchorite for larder? It was clean against reason that any one should so live at any time since the middle ages, and be sound of wits; therefore he was unsound, and, in the meaning of the propounded issue, incapable of managing himself and his affairs.

Such was the foregone conclusion; but when the matter was laid before the jury on the trial of the issue, it was more serious and complicated. It appeared that the old man, with all his oddities and peculiar notions, had mainly managed his property in a thrifty enough way, although not sufficiently so to take a first prize at an agricultural fair; and perhaps a shade worse than the ordinary way of an independent farmer who chooses to regulate his own rotation of crops, and make his own market, good or bad. It was evidently proved that, for a few years past, he had allowed his fences to go down, his outhouses to tumble, some of his premises to lie fallow, and some even to grow up into a diminutive forest of thrifty pines; shrewdly calculating that he could live a few years without buckwheat, and gain his advantage in a future plentiful crop of timber, the profits of which, at his father's allowance of years and his own rate of living, he might himself enjoy. He had perhaps heard of the broad acres which Chatham had set out with cedars, and of the larches which Sir Walter Scott and some Scotch dukes and lairds had planted for the benefit of posterity; and remembered the sage advice, "When you have nothing else to do, Jock, be aye sticking in a tree—it will grow while you're sleep-

ing." So his pine trees would grow, while he was disabled, by rheumatism and years, from handling his plow and reaping his crops, and was unravelling the mysteries of St. John. Probably he had heard or read of the awful extravagance of this generation in the wanton waste of timber, and how profitable it might be to let young trees sprout up and grow to repair it. Such ideas sometimes stimulate men of foresight to do what a short-sighted neighborhood, and anxious grand-nephews, and heirs expectant, consider as very odd things. The most that could be positively said against *Antiquus* was that he was rheumatic, tattered, dirty, and old; that he suffered pines and firs to usurp his buckwheat fields; that he was self-denying in the matter of meats and drinks, in consequence of a great constitutional dread of high living; that he did not belong to any church, having a private religion of his own; had been driven, by some pestilent and unfortunate litigious experience, to study his Bible, without note or comment; and had, like a great many learned, sincere, and conscientious men, queer notions about the book of Revelations and what St. Jude said; considering that they prophesied confused times which men should be looking out for, and providing against;—especially that they prognosticated the great war of the rebellion in this country, which he doubtless thought was enough of Armageddon for his day and generation.

But the singularity of *Antiquus* was fully matched by the odd evidence given by his grand-nephew, a licensed doctor of medicine, on the subject of incompetency and unsoundness, of which we shall give a few specimens from original memoranda of the trial.

Before we do this, however, it is well to state, that it appears from the testimony, that *Antiquus* had for some years lodged with two antique brothers, in one room of

the family homestead, all without wives or families; that both of the venerable brothers had died at a good old age, refusing utterly all medical aid; preferring to take death in the natural way, without any obstinate and futile resistance; and that *Antiquus*, during a long survivorship, had kept up the unfinished domicile, all alone, after the old slovenly fashion. He boiled dry unhulled corn for his victuals; kept rusty pork in his barrel for giving it a savor; went barefoot and coatless, just like Socrates; slept between two foul feather-beds; and rarely graced society with his presence. When he received calls from his friends, he did not dress up and adorn for the occasion, and showed no signs of satisfaction with the compliment; but rather was gruff and bearish, as if they were not quite welcome. When disposed to be pleasant, his chief conversation seems to have been scriptural, and, especially, apocalyptic and prophetic, after the manner of eremites and secluded or banished evangelists. His one room of a wide forlorn house was devoted to all his domestic purposes; being his parlor, his store-room, his kitchen, his bed-room, and his sanctum. Here he spent his lonely days and nights, dreaming away the one, and sleeping away the other. In short, in his mature years of fourscore, he realized that delightful state which so enchanted Pope at the green age of twelve;

“ Happy the man whose wish and care
A few paternal acres bound,
Content to breathe his native air
In his own ground.”

He sold timber trees for an income, like a noble lord; but he did not mortgage the soil that bore them, like a noble lord. He was free from debt, and had money in bank, and in his purse. He and his brothers had made one unfortunate investment of their moneys in a pro-

missory note for ten years, without interest, for which was finally substituted another note of another man more promissory still, which was eventually discharged by a distressing compromise at the rate of five or ten cents on the dollar. This, of course, satisfied him, by logical deduction, that all men were rascals; and when appealed to to confide his affairs to his grand-nephew, or somebody, he expressed his preference for the particular man who had cheated him; saying shrewdly to his grand-nephew, with significant directness and a profound knowledge of human nature, that he had rather trust a rogue than a fool; but on the whole he declined to trust anybody, and resolutely insisted upon his grand natural right of conducting his affairs himself.

Medicus, the grand-nephew, on his examination as a witness to sustain the inquisition, was pressed somewhat by the inquisitiveness of counsel, and the necessity of enlightening the court and jury, to display his theories of unsoundness and imbecility of mind as applicable to the case in hand; and he made them most exactly pertinent; forming a satisfactory general theory by severe induction from one special case which was the whole of his experience,—a fractional part of the Baconian method very much corresponding to the fractional part of his possible future interest in the estate of *Antiquus*.

About sixteen years before the trial of the inquisition, *Medicus* had visited his grand-uncle, with whom then lived his aged brother John, another brother William having died a few days before, in advanced years. After observing their mode of life and management of affairs, he testifies,

I concluded, that there was unsoundness of mind and a weak intellect in Stephen, (*Antiquus*.) I took into consideration, viz.: (1.) their allowing William (the brother) to lie sick and die; (2.) John had gangrened legs, and they refused to have a

physician; (3.) the Irishman [a drunken fellow] was living on the place, and they mentioned the fact of his inefficiency and depredations. I regarded that as weakness of mind [not dismissing him]; (4.) John had a strange way of not talking—don't know that he spoke much during the week; (5.) the barns falling down—Stephen told me that one had disappeared; (6.) a field of 40 acres was overgrown with young pines; (7.) fences gone; (8.) the hay in the barn was stock for the cattle of the whole neighborhood; (9.) one neighbor brought in food, and Stephen said he was a little afraid of high-living—he liked plain living. I think that is an evidence of aberration of intellect. The fact that John had gangrene, and Stephen made no provision for it, is evidence of unsoundness, and when men show want of humanity and sympathy, it is an unsoundness of mind. I offered medical aid and they would not take it—John was over 80 at that time. The fact that Stephen would have the Irishman live there, shows an unsoundness of mind. I regard it more than negligence on his part. The power of mind was deficient in some extent. The barn falling down I regard as a weak state of intellect. The field of 40 acres of young pines is an evidence of unsoundness of mind—letting the cattle run on the hay is evidence of weak intellect. The lack of executive talent is evidence of unsoundness of mind.—On a subsequent visit in 1868, about the time the proceedings in the case were instituted, *Medicus* testifies, "Stephen said he was very feeble—had not been out all winter. He said he had been studying prophecy a good deal, and that the rebellion was prophesied fully in the Revelations—the seven plagues were represented. He found that the world was about coming to an end." "I asked him if he did not want something done in reference to his property. There was nothing more said—he would not listen to any thing in reference to it. This conversation on the prophecy I regarded as a slight aberration of mind." "His saying [on another occasion] that he was willing to submit the care of this proceeding to Stewart [who had given the long-winded note] was in my judgment an evidence of insanity and incompetence.—If he had proposed to take the matter from Stewart and give it to me, it would not in itself have been an evidence of sanity or insanity.—Stephen has a good memory of old and recent events. I don't think it a remarkably good memory—it is ordinarily good. He talks intelligently on most subjects—on all subjects but revelation.—I don't claim that he has ever made an incoherent or wild statement about any thing." By counsel, "What is dementia?" "It is a giving out of the mental faculties.

There is a partial and complete dementia—there is senile dementia. This is a case of dementia." "What are the evidences of dementia?" "(1.) Neglect of one's own person—great filthiness. If a man has lived all his life in filthiness—is unusually filthy—he is of weak mind. (2.) Want of appreciation of value and care of his property. If he does now, as he has always done in this respect, I should say he has always been demented. If a man is physically debilitated, and allows for years his property to become unproductive, he is demented. If a man allows his property to grow up with timber he is demented—he has no will-power. Stephen has seen his property go to waste and has taken no steps to prevent it—therefore he is imbecile. Slovenliness may account for this. (3.) His employing men who have attempted to defraud him. There are all the evidences of dementia in his case. Complete dementia is always attended with loss of memory. This is the most common evidence, and a common evidence of partial dementia. Making wild and incoherent remarks is another; so passion, and tendency to rave and become excited. Another evidence is inability to understand what is going on in the neighborhood. Stephen shows none of these symptoms. He seemed to understand about the war, but to connect it with prophecy. I know of nothing of which he talks incoherently, unintelligently, or incomprehensibly. I never importuned Stephen to let me take charge of his property. I form my conclusion as to his insanity from no one circumstance—from all combined. His spirit of prophecy is to me an evidence of imbecility—this seems to me an absorbing subject. I lay no particular stress upon his propensity to prophecy. There is a great diversity in the indications of unsoundness. There are many degrees of unsoundness. When I see property of several hundred acres with no care taken of it—the buildings all going to ruin—cattle driven off and timber taken off year after year,—I regard it as undoubted evidence of mental weakness. When a man lives in bad condition, it is additional evidence."

After recapitulating the evidences of dementia in the case, *Medicus* testifies, "the chief evidence in enabling me to make up my mind is his want of volition in not removing his drunken tenant. I have no other reason. I know of no other thing or act. I have not made lunacy a specialty. I claim no extraordinary capacity or knowledge in that regard. Stephen lives now, as he and his brothers lived twenty years ago."

It is a little remarkable that all the testimony of experts should come from the same mint—the New York

State Lunatic Asylum,—which seems to have different dies; a circumstance which places this Journal, aiming at entire impartiality, in a somewhat perplexing position: as a relief from which we translate from the original hieroglyphics the evidence of both, and leave it to our readers, as the Court left it to the jury, with perhaps an equal chance of disagreement.

After the testimony of several neighbors was given, Dr. Louis A. Tourtellot was sworn, who said, substantially:—

I am a physician of about fourteen years standing, and have made the subject of insanity and diseases of the mind a specialty. Have been connected with the State Asylum, at Utica, eight or nine years. Have had considerable experience in the treatment of insane persons and those of diseased mind. Have had experience outside, and am familiar with the subject. I came here by request to make an examination of this case. The first examination was made with Drs. Diefendorf & Robb, of Amsterdam. Morgan took me out from here Monday afternoon, at 3 o'clock; arrived at the place about 5 o'clock, went into the house, took the door at the left, and found a couple of children and women; the door of the room was locked or secured; I rapped loudly at the door,—got no answer—repeated the rap,—no answer; remained an hour perhaps, and about as we were thinking to go away, I went up to the window and tried to look through it—it was filthy. I looked in and saw a bed, and I thought I saw a man rolled up—did not see his head nor his heels. I raised the window, and looked in, and did not see him. The other doctor looked in and did not see him. I took a hoe or rake, thrust it to the door, and removed a case-knife from the door, went in, and saw the old man come out from the clock. He shook hands with Morgan and me, and we sat down in a chair on the hearth, and had a conversation of about an hour. I can't give a sufficient idea of the room. The air was close and offensive to the last degree. Every thing about the room was filthy; it was occupied with chests, farm implements, household furniture, and fermenting grain. The hearth was heaped up with ashes; the bed clothes so filthy you would not know whether they were sheets or blankets. It was not suitable to health or life to live in it. He had on a shirt and pair of trousers, both extremely filthy and

stinking—no shoes or stockings on. You could scratch off the dirt in scales. Don't remember about his face and neck. He looks now like another man. I and two other physician sat down, and I asked him some questions. I asked what was the reason he had not reported at the door. He said he did not want to be a witness. I examined him with an eye to see how much intellect he had. I asked him how long he had lived, and who were his relations. I have not his precise answers, but it struck me he was quite precise on events long ago, and those that interested him. I asked him about political matters. He said he did not care much about them. I asked him who the candidates were; he said Grant and Seymour. Asked him about his religion—he had no preferences: as to his interest in his relations—he did not feel much interest in them—did not believe in them—the world was evil—did not trust them. He believed in the foresight of things—that his mother's spirit had manifested itself to him. In regard to Scripture, he was not particularly interested in Scripture—one church was as good as another. He was very suspicious of all his friends—thought they wanted him for a witness, and hid behind the clock. I asked him why he did not get a woman to take care of his room:—he said he could not get a woman—it would not be profitable, and he distrusted them: I can't give his words. I asked him what experience he had as a witness. He said he had had a suit, and had eight witnesses out of thirteen; and if he had had fourteen, he would have won the suit. * * * He did not comprehend quickly. In some question I asked him why he lived so? He said he could not help it. There seemed to be that incapacity of will common in old men. While there, a neighbor came in and wanted to know if he had any hay to cut. He said he might look around, and if he found any he might have it. Then how it was to be cut—on shares? Yes. It was agreed to be so; his share to be cocked up on the ground. There was a lack of active will. I have seen him here, and conversed with him—conversed on the Revelations. He said he believed in Revelations, and went off on that—I could not make his talk hang together, and I stopped him, and he answered a little more coherently. I asked how he came to study Revelations? He said he had study in law, and took Revelation to see what the world was coming to. It seemed plain to him, and is plain to him yet. * * I have heard the testimony in this case. I observed his general manner all this time, as is usual in examinations. From my various examinations, and what I have seen, and the testimony, I think he is not of sound mind. I should think from the evidence,

which is somewhat incomplete, that he is a partial imbecile; and he is growing old, age has weakened his mind, so that there might be a senile insanity added to imbecility. By imbecility I mean a degree of weakness coming on birth which comes short of idiocy. There are different degrees of this. No one imbecility is like another. Some manifest it through the feelings, some through the instincts, and some through the actions. I discovered here the want of active will. I mean by want of active will, an incompetency to originate —to begin to take new steps. * * The want of active will would be likely to show itself in an aversion to business, to changes, and in an incapacity for business. From my examinations and what I have heard, I think he is incompetent to manage himself and his estate. I think it not safe to himself and his estate to allow him to do so. Acts of a party are an evidence of his state of mind. There may be unsoundness of mind without there being insanity. Unsoundness of mind in its general sense would correspond to a certain degree of weakness of mind. There may be a state of unsound mind, where some of the faculties seem strong; they will be affected through it, but will show it more in others. Some may be very bright in some points and not in others. Sometimes experts in insanity may find it difficult to detect insanity when it does exist in reality, and the party has not manifested it markedly. I think it is not safe to leave that form to develop itself suddenly. There may be some cases under the general head of insanity where some of the faculties may be bright, and there is a lack of will-power. Where there is a lack of will-power, a man is liable to come under the control of designing persons. They are subject to be easily imposed upon. If one man succeeds in getting control over another he can do any thing. Often a stranger succeeds more than relatives and friends—there is a lack of feeling as well as a lack of will-power. I discovered that in this case. * * I derive my opinion from a combination of all the facts and circumstances, instead of from a single one. It is necessary to have the history, the habits, and the way of life, particularly of one under inquiry for weakness of mind. A case like the present ought not to be decided without knowing all the circumstances. One might make sharp bargains, and yet be incapable in the business of ordinary life,—the business he follows. Selling timber at a good price would not make any difference. I don't think there is any phrase for the definition of imbecility—any other word that will make it any more plain. *Eccentricity* sometimes characterizes it. Imbecility is *congenital*, or arising in early youth. It applies, in

common parlance, to all weakness. There is such a phase as senile dementia, that comes on in adult life, usually after an attack of insanity. A firm mind becoming weak, or giving way from no apparent cause, is dementia. It sometimes arises from a giving way without an attack of insanity. * * Senile dementia is the gradual breaking down of the intellect from old age. Senile insanity is the same thing, but a larger phase—includes more. When partial dementia or imbecility exists, old age tends to increase it. An imbecile is more likely to be insane in old age, or in the course of his life, than one not imbecile—there will be more dementia as he grows old. In deciding on the mental condition of a man, it is necessary to consider his physical condition. Timidity is a usual manifestation of imbecility. Seclusion is a common symptom, and a desire to be alone. A tendency to filthiness is a common characteristic; so is unthrift, carelessness, want of interest in pecuniary matters. There are cases of imbecility where persons will converse intelligently on some matters, and exhibit considerable intellect. Some imbeciles have shown a great degree of aptitude of performing certain acts and learning certain things, as adding up columns of figures and performing on instruments. Some may show such aptness, and yet be very deficient in will-power and the common feelings of humanity. His conduct and way of managing his affairs afford evidence of his imbecility, and in case of a want of capacity, worth more than the oral examination. The fact that a man that has property, and allows it to go on and waste from year to year, I regard as one evidence of imbecility—it would form much by itself alone. If he also lives filthily, it adds considerably to the evidence. On a cross-examination, Dr. Tourtelot said: He is mentally unsound in my opinion—that is all I have to say in respect of his feelings and want of will-power, also partially in respect of his intellect. I come to this conclusion from what I have seen and heard of him and the testimony here. There is something in his looks that indicates mental weakness from old age—or weakness of mind. I can't describe it. I think the whole look indicates that weakness. He is unsound of mind in regard to his *feelings*—his timidity, unwillingness to be seen, not opening the door, and hiding behind the clock. If he had been told not to see any body or let any body in, that would explain it. When we got in he did not appear to be timid. He said he did not wish to come here and be picked at—whereas a man of sound mind would be anxious to come forward and be examined. He said he supposed his connections wished him to die.

I asked him why he did not get a woman—he said it would be unprofitable. I asked him what form of religion he preferred—he said he did not prefer any form—did not think much about religion or religious affairs—he said substantially, “I don’t know as I have any spiritual interest in religious matters.” It was the same of political matters. About his farming interests, he said to the young man who asked him if he had any hay to cut, “I don’t know—if there is any that is worth cutting you can cut it.” The young man asked how he should cut it? He said he did not know. “On shares?” Yes.—His half of the hay was to be cocked up in the field—I don’t know which one proposed that, but it was so agreed. I thought it showed a listlessness and want of concern in his business.—His *want of will-power* is shown in fastening his door, and when we got in, in not ordering us out. If he had ordered me out I should not have not seen any evidence of a want of will-power in that instance. Morgan [a constable or police officer] went in first—I heard nothing said—no ordering out. I can’t give his response to my question why he lived in that way—the substance of it was that he did not know, it was his inclination. It was an evasive and empty answer. He said he had not been out more than one rod since he was here last April. That was some evidence of want of will-power. I saw him walk across the floor from the clock to the fire-place, and he walked as quickly as I ordinarily walk. He said he had been very healthy in early life—spoke of particular years—he had enjoyed very good health—a number of years he had the rheumatism. He varied his language—and went back and enlarged upon how very healthy he had been. His *intellect* is weak in certain portions. I asked him what he was afraid of, or what he did not wish to see. He said he did not wish to be brought here as a witness and picked at. * * He said he believed in foresight—that he had heard the voice of his mother calling to him when out of doors—calling his name—and he took that as an indication that she was going to die—and she did die from an accident,—that she broke her leg. I asked him whether it was her voice, or a spirit voice. My understanding was that it was a spirit voice. I understood from him that his mother was then living. This is only a slight indication of aberration of mind. I asked him what he was to be a witness on. He said he was given to be under a lunatic circumstance—it was in an undertone. I will swear that I believe that was what he said,—that I marked a degree of incoherence. I think he referred to this case here. He understood that he was tried for lunacy. I don’t think he understands all the

circumstances and facts of the case. * * The house was filthy. He is in remarkable good health—had a remarkable constitution. I think it dangerous for him to live there—if he has lived ten years in that condition, I think it dangerous for him to live there. An extreme change would be dangerous to his life. If he was to go into a family where there are small children, it would shorten his days. He ought to have plain food, and to have pretty much his own way. I think he would be easily influenced by parties to part with his property. I have seen men that fell into the hands of sharpers and got skinned. Having so lived he would have an aversion to change. There would be no serious danger of disposing of his property. He is not a lunatic. I made some notes of questions to ask me—they covered a half sheet of paper—they were questions I desired to be asked. I am sometimes at a loss in determining a case—all I pretend to do is to give my opinion. To a question as to proper treatment, the Doctor replied—"I think he ought to be obliged to keep clean in person and clothing, his room ventilated, and he should have enough society to prevent a liability to injure himself; his food should be plain, and he should be examined by medical men as to his condition. His wishes should be consulted, and his previous habits humored. His talk on the *Revelations*, *in connection* with his condition in other respects, is an indication of mental aberration—but not *alone*. I think there was danger of the old man injuring himself by accident—by falling down. I don't know that any medical aid is necessary in regard to his mind.

Dr. John P. Gray, Superintendent of the State Lunatic Asylum, testified:—

I have had an interview with this old man, and made an examination at the hotel yesterday, for an hour and a quarter; and at Burdick's office last night. I did not detect any indication of unsoundness of mind or insanity in any form. Considering his age and education, I thought him rather unusually active in mind. He is a man of sound mind. He has not the strength of mind of his youth, and he has some eccentricities. He has capacity to control and govern himself and manage his property, as he has done for many years, with the exception that his physical difficulty will not permit him to give it the same personal attention.—He is not imbecile. *Question by Counsel.* Suppose he had 350 acres of land for many years—cultivated, or had cultivated but a small portion—a few acres less

in the last two or three years than before—having no family, but living alone in a house on the property,—with a family in a part of the same house,—doing his own cooking,—taking care of himself,—what does that denote or what is it evidence of? [Objected to, but allowed.] I say it indicates a peculiar, eccentric man. It does not denote what is known as imbecility, or senile insanity, or senile imbecility. I did not see any thing eccentric in him. He was peculiar in his views of Scripture. This might be the result of ignorance. It is no evidence of unsoundness of mind in regard to his views on Scripture. I talked with him. Heard him express his views.—I drew his attention to the subject in the morning. I asked him what was relied upon to show that he was a lunatic? He replied, in substance, his talk about Revelations. I asked him what his views were about Revelations. He thought the 23d chapter of St. John's Revelations, the Book of Daniel, and Jude, referred to the end of the world—what bad things might happen about that time. It was after he had had two law suits that he read on the subject these books, and it was made clear to him—thought he was right as to the meaning of what St. John and Daniel had said. Then he went into a long explanation that I could not call very lucid. Next he said, when he saw what deacons and others might say, he had to read Revelations to see whether the end of the world was coming, and repeated substantially the words of the morning. *Question.* What does that indicate? I can only say that I did not infer insanity—it indicated that he had his own views—not imbecility nor insanity. *Question.* Did they indicate any thing more than peculiar views on that subject? They did not indicate any thing else. At the first interview, to test his memory, his intelligence, and his general interest in things, I asked him when his father came to this section of the country. He said his father purchased in 1804—came here in 1805, and that the next year was the great eclipse. He detailed the difficulties his father had in securing the title, which I can't recall. In answer to my questions, he said he was 82 years of age—his mother died in 1832, his father in 1837, his sister in 1852, his brothers in 1857 and 1858. Touching recent events, I asked him if he had so conducted his farm and business, since the death of his brothers, as to clear his expenses, and make a living out of his property. He said, not the last two years, because the taxes were so high, and he could not work himself. In answer to a question I put, he said, he had managed the affairs since his father's death, as well as since the death of his brothers—had paid bills, and received money for things sold and bought; had con-

tinued to do so up to the present time. I asked him what his taxes had been for the past few years. He said, over \$1,000 the past six years. I asked how much six years ago.—He said about \$243 and some cents.—Five years, \$230—four years, \$200;—1867, \$173 and some cents, and the school tax, which was \$2. *As to his feeling towards his relatives*, he said, I have no malice towards any—some of them are rich, some drunken and good for nothing. He said he had never made a will—if he died, the property would all go by the law. I asked, if he had ever thought of disposing of it—selling;—he said he had not—it was the most secure property he had. I asked, if he did not make his expenses, how he lived? He said he always kept money, from \$600 to \$1,000 about him. Where did he keep it? Some of it in Bank, some he had himself. Why did he not put it all in bank? Because they did not pay any thing on deposits. Why then he kept any at all there? Because it was safer, as the country now was. I repeated a number of these questions to him, but not in the same connection as before. To my questioning from the early part of his life to the present, I received in substance the same answers. I also asked him if he was a church member. He said, no—sometimes he went to the Methodist church, sometimes to others. He did not join them. I asked why? He said, he was not good enough. I asked him about the cultivation of his land: his account of it did not differ materially from what has been stated here. Said he had not cultivated much plowing, and had grown grass, and kept some stock,—never cultivated much grain—had cultivated less since his brother's death, because he could not get out so much;—thought he would make as much by letting it grow up to timber. One field he had in buckwheat, after the death of his brothers had grown up to pines, which he thought would be more valuable than his cultivation would have been. I asked him if he did not advise with his neighbors;—he said, he did not;—he talked once with Squire Creighton about this lot, and he agreed with him as to the value of the pines.

In my interview last evening, I again asked him if he had thought of disposing of his property. He said, no—he would not sell. I asked, if he thought of making a will. Before he answered, another question was asked—If he willed his property, would he give it to his relations? He said, when he died they would get it. He would not fight them after he was dead. They ought not to have it after the way they had acted, but he would not go to his grave with malice in his heart;—that he could will only a portion of the property, and of the property his father had left only a portion. He then

spoke of his father's will and its provisions. His father left it in seven parts, six to the boys, and one to the girl. The other girl had left home early, and had not done any thing to add to the property, and his father had excluded her. I asked if he was hard of hearing. He said no,—he could hear. If he heard any of the evidence given in court? He said he did. * * I asked him how he had fastened his house. He said he had put up some fanning mill sieves to the windows west and north, thinking it would be a good plan to have them dry and keep the cats and dogs out. He had put up a sheet at the east window which was open, fastening up with a light pitch-fork. He had fastened the door with a broken case-knife, by slipping it over the latch. He had fixed the door before the persons came there, to keep the children out, who had some kittens which they brought in and bothered him—Mrs. Strat's children in the other part of the house. * * I asked him if he had read the Scriptures before these law suits and this war. He said, yes, but not so much. Why he had not then got the same views of Revelations? He said he had read them before without faith—if you had not faith in reading the Scriptures you could not learn them. * * I asked him what he lived upon. He said, mostly wheat bread, sometimes corn bread, and buckwheat cakes and butter. I asked if he drank tea and coffee. He did not. He had meat in his house, but had not eaten meat for sometime past—more butter. He said Mrs. Strat did his washing—some other person did it before she came there; he had 15 or 16 shirts. Strat made his clothes. I asked how often he washed himself. He said, every day. Mrs. Strat brought in hot-water, and he washed with it every night—he could not sleep without it,—had pain. I asked how he came to have such dirty, black feet. He had been washing them with coal and ashes. I asked him why he went behind the clock. He said it was to get out of the way so they could not see him. Some one asked him, in my presence, what he said to the persons that came in the door. I think he said 'what the devil do you want here?' I asked him why he did not fight them and put them out. He said, he did not think they would hurt him. He said, he knew that this business was coming off, and he would have to come out to Court on Tuesday. He did not want to be talked to. He stated how they got into the house; they rapped and banged on the doors first—they used a knife to pry up the window a little distance, and then pushed it up and took the pitch-fork and pushed out the knife from over the latch. I asked him how he slept? He said he had two feather beds on a bed, and in

summer he slept with one blanket and quilt off, and in winter with more clothes and a feather bed over him—said he had more feather beds in the room than he wanted. I asked why he kept this rye in the room. He said he brought it in to keep it dry—ten bushels,—he thought all along they might want it to sow; a little of it had grown. I recall that, in my first interview, I asked him how he conducted his farm, having no wife. He said, he gave it out on shares. I asked the name of the constable of the town. He said, Noonan. He had not much interest in political affairs,—had not voted lately. I asked him why he did not vote now. He said the majority on the other side was so large there was no use of it. I asked who was the 'Squire' of the town—he replied, Mr. Robb.—I did not discover any ill-will or unnatural feelings towards his friends or relatives. He is not in my opinion unsound in respect to his feelings. I would not use the term 'will-power.' The will is the executive faculty of the mind. I don't mean to swear to metaphysics or questions of metaphysics, or to a metaphysical proposition, as I am not willing to give oral evidence on any abstruse metaphysical questions. In respect to his power of controlling himself I should say his mind was sound, though not perhaps so vigorous as at some other periods of his life. As to the management of his estate, I should be inclined to think he would manage it his own way. In respect to his intellect, it was sound—I did not think he was insane. I do not think he is liable to be imposed on and his property taken from him by reason of any insanity or unsoundness of mind. On cross-examination, Dr. Gray said—there is a technical language and a popular language on the subject of insanity. Writers and experts differ in their technical terms to a considerable extent. It is a difficult problem in science. I have tried to employ popular language. I have not given any attention to the style. 'Will-power' is not the best term to employ. It is a matter of taste, and on matters of taste distinguished experts differ. I understood the term—but did not wish to be led into the use of it on the examination. The will is the executive faculty of the mind that guides and puts the mind in operation. *Question.* Suppose that all the other faculties of the mind are sound and in good order, and the executive faculty defective, would the mind be in a sound and healthy state? *Answer.* Every individual having to be judged by his own stand-point, I should not be willing to answer that question in a general way. As persons are weak or strong of will not always in relation to the soundness or unsoundness of the intellectual faculties, I can only answer in that way unless the word

unsound is put in for *defective*, as that has a specific meaning. *Question.* What do you understand by the word *defective* as applied to the mind? *Answer.* Not a complete, well-rounded, and balanced mind,—not a diseased mind. The term mind comprehends all the faculties. *Question.* If there be some one of the faculties comprehended under the term *mind* in which it does not act naturally or normally, would the mind in that instance be defective? *Answer.* The mind in that case would be unsound,—in a popular sense, defective. The will is the executive director; if it is in a condition that it does not act normally, it would be in a popular sense defective,—in a technical sense, unsound. There may be some writers who use the term 'defect.' I don't recall any. There is a great range of varieties and degree of unsoundness,—greater in degree. I never found an author that can fix a standard of soundness and unsoundness. Every person must be his own stand-point. Experts differ on the same state of facts; what one calls soundness, another calls unsoundness. In making up a case, we must know the habits and idiosyncracies of the individual. It is difficult sometimes, on examination, to determine unsoundness. It sometimes requires repeated examinations. In unsoundness of mind, it often happens that there is more intelligence, activity, and vigor in some directions and on some subjects than others. Seclusion is one of the conditions marking unsoundness, which we look for and find. I use unsoundness of mind in the sense of insanity. I use them as synonymous terms. I know what I understand unsoundness of mind to be; I understand what I think it means in a technical sense, and what I think it means in a popular sense. There is no kind of unsoundness of mind which is embraced under the general term of insanity. I comprehend under that term imbecility and epilepsy. Insanity embraces all kinds: some authors use unsoundness. *Question.* Do you call a will so defective that it cannot direct the other faculties, a case of insanity? *Answer.* Yes, if that defect is the result of a disease, and not constitutional or congenital. By disease, I mean a disease of the brain, by which the manifestations of the mind are disturbed, shown in a change in the way of thinking, feeling, and acting of the individual. *Question.* If a person has a will so defective that it cannot control the other faculties, is that a disease of the mind? *Answer.* It would probably be classed under the head of imbecility. Imbecility is not properly a case of diseased mind, but embraced under the general term insanity. Congenital imbecility increases as a person grows old—congenital defect would increase with increasing age. There

is a disease known as senility in all books on insanity. It comes after the decay of the faculties from age. There are other species of dementia not called senility. Acute dementia is sudden. Dementia follows each of the other forms of insanity. It also supervenes upon paralysis and epilepsy. In a case of senile dementia the power of the will would be decreased—enfeebled. In a case of congenital imbecility it reaches that state when the man is fatuous. Senile dementia and congenital imbecility are increased by the infirmities of age so that the manifestations would be substantially the same as to executive power. I adopt the system of the unity of the mind.—Extreme filthiness is a condition found in imbecility, and universally in dementia, and is always taken into account. Timidity is also one, but not so common. If a man's will is such that it cannot govern the other faculties, I would not think him in a fit state to govern himself or manage his property. One in a state of partial imbecility is more likely to get under the control of designing persons. * * A man is not at all times, even in health, under full control of himself,—would do one day that he would not do another. If he habitually did so, I would take that into consideration, with other things, if his capacity was questioned. If a man possessing farms should voluntarily let them run to waste for want of proper care, and grow up to brush,—so go to waste that the property depreciates one-half, I should regard that as an indication of want of power. I would not give it much weight. It might be taken into account. In a given community men in a normal condition ordinarily act in the same way in reference to their own interests. I am aware of the legal presumption that every man acts with regard to his own interest. I never saw this old man except at these interviews. My conclusion is based upon my examinations; but what I have heard here has of course got woven into my mind. I give a good deal of my conversation with him in his own language, but mostly only in substance. I asked him questions from time to time and he answered. Dr. Joslin was present a few moments, and both of the counsel were present, and some strangers that I did not know. I suggested the inquiries in relation to taxes. * * I made no suggestions as to the examination of witnesses. I don't know whether the subjects of examination were suggested by any one. I selected the subjects of examination entirely. Some hold that eccentricity often develops into insanity; the line is difficult to mark. It is a common thing in aberration to have religious delusions. I was not present at all this examination. I was out for half an hour, and do not know

what was done while I was absent. Being asked if what he had heard had changed his opinions, he replied that his opinion was the same as heretofore expressed.

At the close of the testimony, Judge Stewart stated to the jury in substance :

1st. That the case was one of unusual importance, not alone to Tyler or to his relatives but to the entire community in so far as their verdict might establish a precedent in similar cases.

2d. That to deprive a citizen of his liberty—place him under the control of a committee, together with his property, the most satisfactory and conclusive evidence should be furnished that he was a person of unsound mind; and that they were not to take into account, in any manner, his physical condition, his mode of living, his management of his estate; whether he had caused it to be productive, or allowed it to go to waste or depreciate in value; except in so far as the expert evidence in the case showed, or tended to show, that such mode of living, or management of his estate, might be taken into consideration as evidence of unsoundness of mind.

3d. The judge further stated to the jury, and repeated to them, with great emphasis, that it mattered not if Tyler's legs were both severed from his body—his arms were off—both eyes out—and he physically wholly disqualified to look after himself or his estate; yet, if his mind was sound, he was the lawful and rightful custodian of himself and his property. The judge further stated that he attached no importance to the testimony that Stephen as well as the other members of his family, had lived in great filth, or that he had failed to cultivate his lands as his neighbors had cultivated theirs, or that he had allowed his lands to grow young pines; that, if of sound mind, he had a right to live as he pleased; to cultivate and improve, or to neglect to cultivate and improve his lands as he pleased; and that those things, by themselves, were not evidence of unsoundness of mind; but left them all to the jury with the testimonies of Drs. Gray and Tourtellot; who, he stated, were the only witnesses in the case claiming to be experts, and competent to speak of diseases, or unsoundness of the mind.

The case was submitted to the jury Saturday morning, and after deliberating until 6 P. M., they were discharged; being unable to agree, and standing, as nearly as can be ascertained, about equally divided.

To treat with more gravity a case with which we have somewhat played, although we have been careful not to sacrifice truth in our playfulness, it is a serious question, not thoroughly solved, what sort of interference is proper and allowable in the case of a decaying and diseased old man, situated just as *Antiquus* seems to be ; what treatment humanity dictates, and the law, at the same time, will justify or inforce. Old age is entitled to its peculiar indulgences, and many of its whims cannot be handled to our liking, without an interference with personal liberty. If a man, without family or descendants, chooses to retire from the world, and to consult his ease after his own fashion ; to desist from the further pursuit of gain, and rest content with what he has acquired, satisfied that, without particular and annoying care about it, it will carry him comfortably through to the end of his days ; unless decrepitude has made him helpless, and senility has clearly impaired his faculties, so that he is dependent on the care and watchfulness of others for ease, sustenance, and what they choose to consider as comfort and happiness ; it would seem that he has a lawful right to insist upon an immunity from interference, and claim deference to his own wishes and inclinations ; to wrap himself in his chosen solitude, like a caterpillar in his cocoon, and await the change that must happen to all.

We are apt to consider many people as in a very wretched plight, who from conscientious or superstitious motives, or because of some idiosyncrasy, have reconciled themselves to a state of living that defies all conventional usages ; to a meagreness of diet, a scantiness of vesture, and even to mitigable chronic diseases which they persist in enduring without alleviation ; to conditions that seem to us quite inconsistent with any notion of comfort, much less of enjoyment. They suf-

fer from choice, or from a wonderful obstinate patience or submissiveness, what most people shun with horror ; and obtain what they call satisfaction, from a state of life that causes the rest of us to shudder. There are hermits and anchorites whom nobody thinks of disturbing. Simeon Stylites was allowed for thirty years to lodge and board on the top of his pillar, exposed to all the inclemencies of the seasons, day and night, without any writ *de lunatico* served upon him, or of *mandamus* requiring him to come down, and sit at table, and sleep in a bed, like other folks. Simeon doubtless felt as if he were at the height of spiritual enjoyment. There are now and then, obstinate cases of this sort, of which that of *Antiquus* may be one, who refuse to be persuaded that they can be any more comfortable than they are ; rejecting all proffered sympathy and attention ; and declining all offers of companionship and personal aid as a positive interference and presumption. They decidedly prefer to be let alone, as their highest enjoyment ; to be suffered to slip down the descent of life without question, observation, or meddling. This is very unpleasant to us ; but is it not pleasant to them ? and have we a right to exact that they shall be pleased with our way of pleasure, instead of their own ? It is a question of personal feeling and personal liberty of action ; and so long as they support themselves, pay taxes, and submit to the laws, why should they be annoyed with juries of inquisition ? Nobody ever thought of restraining Thoreau from dwelling all alone in a hut in the wilderness, and utterly secluding himself as often and as long as he pleased. John Baptist lived a good many years in the desert, shabbily clad in skins, and with no greater variety for the table than could be made out of the various modes of dressing up locusts with wild honey. A great many miserly old wretches beg

their daily scraps, while they nightly sleep on well-filled purses for their pillows; but they incur more peril from the gospel than from any inforced law. Avarice, seclusion and eccentricity, however blameable in a moral and social aspect, do not come within the reach of inquisitions, and there is no human law that we know of that makes dirt and raggedness a crime, or necessarily an evidence of unsoundness of mind; although they distinguish some forms of disease, and are the cause of some. A great many tribes of the human race go foul and unclad, and seem to like it; and so does an occasional odd fish of civilized society; who is yet shrewd enough to save or make a tolerable fortune, and to execute an unimpeachable devise of it, particularly if it be charitable uses. Diogenes was no fool or *non-compos*; yet he chose to be independent of conventional usages, in very enlightened days, and to roll his domicile about from street to street; to utter sharp sayings to Alexander the Great for standing in his sunlight; and not finding sunlight strong enough, to help it with a lantern, when he wanted to concentrate sufficient luminous power, natural and artificial, to find an honest man;—a search, which, so far as is recorded, was not worth the candle. A jury, now-a-days, might not be very far out in considering it as the highest token of imbecility and delusion, that he should be searching, with the most brilliant illuminating power, for such an antiquated monster: he might as well be looking after a live megalosaurian, which, according to the geologists, could not have existed for the last ten thousand and odd years; so remote is the era of megalosaurians and honest men: extinct tribes both, to be traced only in paleontological memorials, lying in ancient strata under the earth, or in quaint inscriptions on antique mossy tombstones in country grave-yards above it. Socrates, the immortal,

is another example of an ugly, scant-fed, and bare-footed oddity; a little more conversational, social, and peripatetic than *Antiquus*; but with a grievous disadvantage in Xantippe, that *Antiquus* luckily escaped by his persistent celibacy. Dr. Johnson, surrounded by quarrelsome old ladies, who kept him continually in hot water; and feeding his ugly cat Hodge with extravagant oysters; and who had also heard his mother's voice calling his name under impossible circumstances; was another example that *Antiquus* probably regarded rather as a warning against domestic and social life, and household pets, than as a recommendation of that condition; so he shrewdly shunned all such indulgences, and preferred to cultivate a meditative solitude, and starve and doze in undisturbed independence.

If a man has a congenital imbecility, it seems singular that he should be able to manage his affairs, even slovenly, to fourscore, and then first be summoned to answer for it, and submit to an inforced guardianship. Such imbecility is certainly not senile, but juvenile and life-long; no more incompetency now than it always was. *Medicus*, being a doctor of some years standing, and having known his grand-uncle and his family for sixteen years; they living all that time, as he knew they did, in the same condition as to imbecility, negligence of affairs, indifference to doctors, and other indications of a somewhat lunatic character; should not, it seems, have waited until his venerable relative was fourscore and upwards, before he thought of placing him in the custody of the law. The humane feeling which distinguishes his profession should have prompted him, a good many years before he did it, to look after an infirm old man, and see that his decrepitude and incapacity were duly protected against his drunken tenants, the plunderers of his timber, the trespassing hay-de-

vouring cattle, the decaying fences, the dilapidating barns, the diminishing buckwheat, and the incroaching pines. This long forbearance from doing a very natural kind office, finally but unsuccessfully attempted, carries a faint suspicion of some fresh interest in the old man and his affairs, that has a smack of last wills and testaments in it.

From some of the testimony adduced in this case, and from the disagreement of the jury in the face of the strong and pointed charge of Judge Stewart as to the law, we infer that it is a common impression that every man who is lazy and negligent about his affairs; every man who has inherited or accumulated enough to enable him, if such be his easy temper, to "let things slide," as the common phrase is, while he himself is sliding down the vale of years, and sliding all the more easily because he lets every thing else slide along with him, instead of torturing his mind with the irksomeness of "pushing things;" every man who, in his wane and decrease, lays himself up, for the rest of his days, in lavender, or perchance other odor less approved by delicate nostrils, and who chooses to care for nobody because nobody cares for him; every man whose faculties slack somewhat, especially his famous "will-power," which he may have weakened or exhausted in procuring the very competency which he has provided for just such a contingency, which he enjoys after his own fashion, and which is abundant for his own wants, although it might possibly be so husbanded as to make the one-seventieth part of each of his grand-nephews a little bigger when he dies; every man who shuts himself up in a single room of a forlorn house, instead of littering and fouling all the rooms in it; every man who thinks more of Daniel, St. Jude, and the Apocalypse, than he does of polities, or of his pigs or his fences, his grass crops or

the prizes of agricultural fairs, and who suffers pines to grow where buckwheat did; and yet showing no symptom of insanity or imbecility more than these peculiarities or eccentricities indicate: every such man, although he may be in some sense a nuisance or a disagreeable anomaly of civilized life, is to be deemed legally incompetent to manage himself and his affairs, and should be incontinently committed to legal guardianship, with the privilege of enjoying himself according to rule and conventionality; of having his hair cut and his beard trimmed; of dining on what offends his gorge; of being clad in shaped and snug tailor's coats and trowsers, instead of his easy rags and patches; of being put into pinching boots, instead of going barefoot; of having no pocket pence; and, after having lived all his days independently, of being condemned at last to be subject, for the rest of them, to the whims of other people instead of his own, and to have for dole, or what he thinks very much like it, the bread that his own means provide and pay for.

Legal incompetency is not to be inferred from eccentricities or habitual deviations from common and customary modes of life and business; from habits of extravagance or wastefulness, or from the other extremes of self-denial, parsimony, or avarice; all of which are no legal gauges of unfitness or incapacity, unless in such particulars there is shown to be an abrupt or remarkable change from old modes and peculiarities of life,—which is generally a sure indication of some impairment of the faculties,—or unless the ordinary faculties are obviously so broken or decayed as to present a ruin in contrast with their past vigor and perfection. *Antiquus*, it seems to us, is proved to be somewhat of an oddity; but never to have been, according to his sworn expression, "in a lunatic circumstance;" and never so much of an

imbecile as not to appreciate the difference between a "rogue and a fool," which must be set down as a striking bit of shrewdness in a man of fourscore. That he refuses to marry in his old age, when he sadly needs nursing, is perhaps the strongest token of imbecility; but he is doubtless, without knowing it, of Lord Bacon's mind, that "certainly the best works and of the greatest merit for the public have proceeded from the unmarried or childless men;" which he is willing to exemplify by leaving his pine forests and his commentaries on the prophecies to preserve his name and memory to the next ages.

To have found *Antiquus* incompetent, would have been to deny also his disposing power; a power which Chancellor Kent once maintained, in a like case, by affirming the will of another *Antiquus* who was between ninety and a hundred when he made it. "It is one of the painful circumstances of extreme old age," says the humane Chancellor, "that it ceases to excite interest and is apt to be left solitary and neglected. The control which the law still gives to a man over the disposal of his property, is one of the most efficient means which he has in protracted life to command the attentions due to his infirmities." No wonder then, that anxious descendants should find so much imbecility in an ancestor or aged relative whom they may succeed, and seek to impeach his testamentary power by an inquisition that shall at once leave him in their custody, and incapacitate him from executing a valid testament, which may cut them off from the inheritance.

Lord Bacon somewhere intimates that old men get wives for nurses. If *Antiquus* would so far subdue his cynicism as to contract matrimony with some mature widow, childless, and free from obnoxious feline and canine attachments, and withal of sufficient surviving

power to outlast him; and would make for her an ample provision both of domicile and of pine lands, before juries and experts begin to agree whether he is *capax* or *incapax*; he might still, under her affectionate nursing and tidy ways, reach his hereditary centennial, and thwart the rapacious tendencies of remote collaterals who expect to divide his possessions. He would also have the satisfaction, in such a connection, of seeing new revelations, surpassing any that his fourscore years have yet discovered to him, else his experience would widely differ from that of his octogenary brethren who have tried that sort of consolation for old age. He might even enjoy the singular happiness of Masinissa, who lived beyond ninety, and in his declining years was constantly fortunate—"decursu ætatis constanter felix; nonagesimum annum superavit, et filium genuit post octagesimum quintum!"

THE PULSE OF THE INSANE.

BY EDWARD R. HUN, M. D., SPECIAL PATHOLOGIST OF THE
NEW YORK STATE LUNATIC ASYLUM, AT UTICA.

Before examining the results of investigations made upon the pulse of the insane, it might be well to consider the physiological pulse as traced by the sphygmograph, and also to determine some of the changes which it undergoes in consequence of morbid conditions not attended by psychical phenomena.

The normal pulse trace as obtained by the sphygmograph of Marey, consists of an upright or vertical line terminating in a moderately sharp point, and followed by a gradual line of descent, which latter line is broken

into waves or undulations at two points. Such a trace is



Fig. 1. Normal pulse. Tricrotic.

represented in figure 1, and in consequence of its having three apices it is termed *tricrotic*.

If we discard the various forms of cardiac disease as foreign to this paper, we may state that the most frequent and interesting of the many metamorphoses which the pulse undergoes, are these which accompany febrile action, and one of the most important of these is an increased rapidity. As the temperature of the body rises, the pulse becomes more frequent, and at the same time assumes a different form.

In order to explain this change we will find it convenient to give a name to the various portions of the trace, and therefore we call the apex formed by the upper extremity of the line of ascent, in the normal type, and the commencement of the line of descent, the great or primary wave and the two undulations which interrupt the line of descent, the first and second secondary waves respectively.

Now as the pulse becomes more frequent we find the first secondary wave diminishing in size, and at a temperature of about 104° , when the pulse varies between 100 and 120 per minute there remain only two apices to each pulse curve, the first secondary wave having entirely disappeared, and in place of the *tricrotic* or normal pulse we have the *dicrotic* or characteristic fever pulse.



Fig. 2. Fever pulse. Dicrotic.

As the temperature and rate of the pulse increases we have yet another modification of the pulse curve. The second secondary wave diminishes and finally disappears at a temperature of 106° and a pulse of 140 per minute, and the result is such a trace as is represented in figure 3, where both secondary waves have disappeared, and only a single apex is observed. This pulse is termed



Fig. 3. Fever pulse. Monocrotic.

monocrotic. Between these marked metamorphoses we find intermediate types where the pulse trace is termed *sub-dicrotic*, (fig. 4,) and *super-dicrotic*, (fig. 5.)

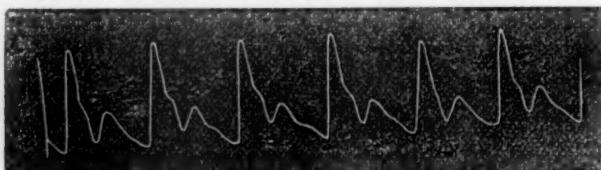


Fig. 4. Fever pulse. Sub-dicrotic.

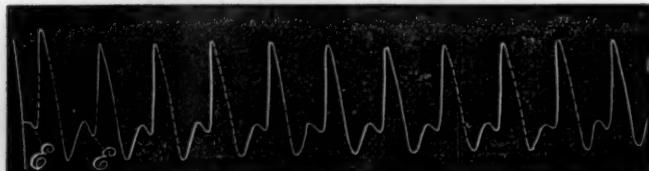


Fig. 5. Fever pulse. Super-dicrotic.

The principal modifications of the pulse curve therefore consist in a deviation from the *tricrotic* to the *dicrotic* or *monocrotic* type in ordinary forms of disease, and such deviation from the normal standard is accompanied by an increase not only in the rate of the pulse but also in the temperature of the body. Hence, there exists a certain harmony between the temperature and the rapidity and form of the pulse. This harmony holds good in cases of depression as well as of exaltation of temperature, for in cases of algidity such as are some-

times found during convalescence from acute fevers, where the temperature falls below the normal standard, the rate of the pulse is diminished and at the same time the sphygmographic curve becomes more decidedly tricrotic than in health.



Fig. 6. *Algid pulse.*

It has been found by Wolff, and is so stated by him, that "when this harmony between the temperature and the pulse is so interfered with that an elevation or depression of temperature is not accompanied by a corresponding alteration of the pulse curve, we have a disease or a period of a disease in which the central nervous apparatus is implicated to an unusually great and dangerous extent. Thus we find in febrile diseases of the nervous system a loss of parallelism between the temperature and the pulse, as is often manifested by the rate of the latter."

The same author finds, and my own investigations fully confirm his statements, that in the insane this loss of parallelism between the pulse and temperature is destroyed, and furthermore, that the form of the pulse curve is fundamentally altered. The trace no longer presents a series of acute apices, as in the normal or febrile pulse, but each curve is surmounted by a horizontal line or flat top, and assumes the form described by Marey as the senile pulse.

Before entering more minutely into the study of the pulse trace of the insane, I may with propriety mention, that in persons who suffer from psychical derangement, the bodily temperature differs but little if any from the normal standard, except in cases where there is some

intercurrent disease, and as a general rule an elevation of temperature above 100° indicates the existence of some complicating disease which does not directly depend upon the insanity. The temperature of intercurrent febrile diseases in the insane runs the same course as in the same diseases in the sane, and under these circumstances the pulse undergoes such modifications that in some instances an insane patient who has when apparently in good physical health presented a pathological pulse trace, may under the influence of febrile reaction produce a curve which closely resembles the normal *tricrotic* pulse of the sane.

The pathological pulse of the insane always tends toward the *dicrotic* or *monocrotic* type, being never *tricrotic* in uncomplicated cases. It becomes more characteristic as the mental condition degenerates, and assumes its typical form in the most profound state of dementia. The following traces which I obtained from patients in this Asylum, will serve to demonstrate the pulse curves so found in the different forms of insanity.



Fig. 6. Melancholia. Female, aged 38 years.

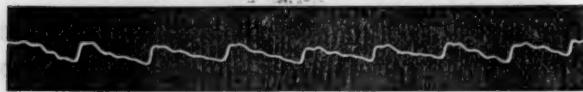


Fig. 7. Melancholia. Female, aged 28 years.



Fig. 8. Melancholia. Male, aged 48 years.



Fig. 9. Melancholia. Male, aged 51 years.



Fig. 10. Acute mania. Male, aged 40 years.



Fig. 11. Acute mania. Male, aged 28 years.



Fig. 12. Sub-acute mania. Male, aged 26 years.

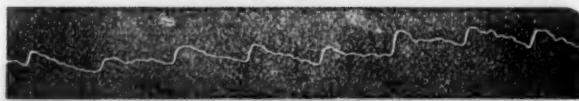


Fig. 13. Paroxysmal mania. Female, aged 30 years.
Subsequently died of appoplexy.



Fig. 14. Periodic mania. Male, aged 51 years.
Taken while he was recovering from an attack.



Fig. 15. Chronic mania. Male, aged 36 years.



Fig. 16. Chronic mania. Male, aged 60 years.



Fig. 17. Chronic mania. Male, aged 38 years.



Fig. 18. Chronic mania. Aged 78 years.



Fig. 19. Chronic mania. Aged 50 years.



Fig. 20. Dementia. Aged 18 years.

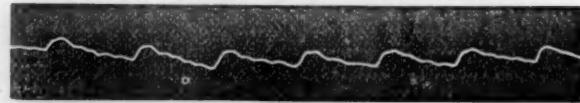


Fig. 21. Dementia. Aged 45 years.



Fig. 22. Dementia. Aged 37 years.



Fig. 23. Dementia. Aged 34 years.



Fig. 24. Dementia. Aged 40 years.

An analysis of the above traces shows two points of difference between them and the normal type: 1st, a loss of *tricrotism* with a marked tendency to the *dicrotic* and *monocrotic* form, and 2d, a flat top in place of the acute angle found in health and febrile diseases. The first of these changes we have already found to exist in cases of fever when the temperature of the body is elevated, but among the insane there is no increase of temperature, and we may therefore consider a dicrotic pulse unaccompanied by an abnormal rise of temperature as one of the physical phenomena of insanity.

The second deviation from the normal standard is still more characteristic of psychical disorder. This peculiar pulse curve with a flat summit has been described by Marey, and attributed by him to a pathological condition of the arterial walls, whereby their elasticity was diminished and an impediment offered to the free flow of blood. Now in the examples of this form of pulse which he figures in his work upon the circulation of the blood, Marey states that his patients were inmates of the Bicêtre and Salpêtrière, which asylums contain for the most part insane, demented and paralytic persons. Consequently, we are as fully justified in considering the alteration of the pulse curve due to the condition of the nervous system, as we are in attributing it to a pathological state of the walls of the arteries.

Moreover, I am fortunately able to furnish pulse traces of two patients who have fallen under my observation, in which Marey's results are directly contradicted.

Fig. 25, represents the pulse of a patient aged 60 years, who presented upon physical examination all the characteristic symptoms of structural change in the heart and arteries. Angina pectoris, dyspncea, and a condition of the radial arteries which communicated to the finger, a sensation as if they were firm, inelastic cords, were symptoms which I frequently had occasion to observe,



Fig. 25. Male, aged 60 years.

and yet the trace has an acute apex, and is distinctly *tricrotic*.

Fig. 26, on the other hand, is the pulse of a patient who was hemiplegic, and presented symptoms of mental

derangement resulting from an apoplectic attack, and in whom neither auscultation or palpation revealed any

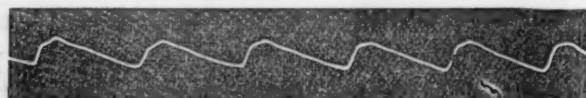


Fig. 26.

abnormal condition of the heart or arteries, and yet we find a flat-topped monocrotic pulse curve.*

If we examine the traces represented in figs. 12, 15, 17 and 22, we find the well marked senile pulse of Marey, while the age of the patient contraindicates atheromatous degeneration, and we are therefore compelled to seek some other explanation of the phenomenon, the key to which, I think, can only be found in the sympathetic nervous system.

The disordered condition of the ganglionic system in the insane, is evidenced by such marked symptoms that it would be indeed surprising if we did not find a pathological condition of the pulse. The sluggish circulation through the peripheral capillaries is rendered evident by the passive congestion of the hands and feet, and the white line bordering the edge of the lip, observed both in melancholia and mania, and attains its maximum when the patient relapses into the most profound dementia; the frequent attacks of local hyperaemia,

* NOTE.—I do not intend to be understood as denying that an atheromatous condition of the arteries may not be accompanied by a pulse which gives a trace similar to that seen in fig. 26, but I think that in these cases the same defective nutrition which causes the change in the walls of the blood-vessels may also interfere with the proper reparation of nerve tissue, and thus influence the form of the pulse. In fact, a diseased condition of the nutrient vessels of the brain is one of the most frequently observed facts in cases of paralysis and mental disorders, and it may be that the alteration of the nervous tissue is due to the disease of the vessels, and that the pathological pulse is therefore the result of the combination of two elements, which are related to one another as cause and effect.

which in some cases are sufficiently intense to result in rupture of the vessels, and to produce that remarkable appearance known as *haemato-ma auris*, can only be attributed to the disordered action of the sympathetic system, while the altered condition of all the secretions, both cutaneous and intestinal, must be referred to the same agency. Again, the defective nutrition of the insane is but the index of some unknown cause, influencing the functions of organic life through the medium of the sympathetic ganglia.

Comparatively recent investigations of physiologists have demonstrated that the centres of the great sympathetic are situated in the *crura cerebri*, and pass downward along the central axis of the cord. From these centres fibres radiate toward the periphery of the body in close contact with the fibres of the cranial and cerebro-spinal nerves, which they accompany for a short distance, and then branch off to supply the walls of the blood vessels, over which it is their special functions to preside. Other fibres again pass into the gray matter of the hemispheres, and are intimately connected with the nerve cells occupying the cerebral convolutions. Hence, it results that the sympathetic nerves may be influenced not only by external agents acting upon their peripheral extremities, but also by emotional causes influencing their centripetal prolongations. In fact the experiences of daily life continually offer examples of this mode of irritation, the emotions of fear, anger and shame all give rise to external phenomena with which we are familiar, as pallor of the countenance, blushing, &c., &c.

In insanity, when the cerebral activity is far greater than in health, and where a constant flow of the most dissimilar ideas passes through the mind in rapid succession, each in turn calling forth some emotional excitement, the sympathetic centres are subject to continual

excitation, and by reflex action manifestly influence the phenomena of the circulation. This centripetal irritation, when continued for a certain time, wears out the excitability of the ganglia, and results in a paralysis of the nerve filaments supplying the circulatory apparatus, in consequence of which, we find a passive dilatation of the smaller arteries and capillaries, with a loss of the normal elasticity of their walls. The free flow of blood from the arterial to the venous system is interfered with, and the result is a sluggish, monocrotic form of pulse. It is not unlikely that cardiographic tracings of the action of the heart itself would show a deviation from the normal rythm, so that the insane pulse may depend not only upon the abnormal condition of the vessels, but also in some degree upon functional disturbance of the cardiac contractions.

In conclusion, I will give a few traces borrowed from Wolff, which corroborate the opinion expressed above with regard to the action of emotional excitement upon the form and rythm of the pulse.

Figure 27, represents the pulse of a patient having

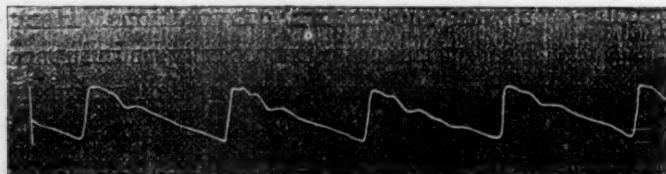


Fig. 27. Chronic Mania.

chronic mania during a condition of bodily and mental repose, while figure 28 shows the modification of the



Fig. 28.

pulse curve caused by the patient's having a strong desire to ask a question.

Figure 29, is the pulse of a patient who exhibited



Fig. 29. Mania.

slight symptoms of mania, and who presented the pulse trace shown in figure 30, under the influence of excite-

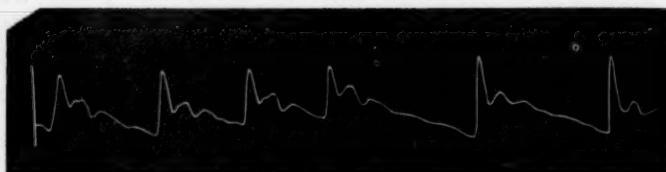


Fig. 30.

ment caused by a desire to complain of bad treatment. As he became still more angry his pulse assumed the form represented in figure 31, and finally being no longer



Fig. 31.

able to restrain himself, he broke out in a storm of words, and gave the trace figured in figure 32.



Fig. 32.

In the last case we find that emotional excitement not only influences the form of the pulse, changing it from the *dicrotic* to the *tricrotic* type, but it also modifies the cardiac rhythm, and produces a kind of inter-

mittence, which continues during the effort to restrain the feelings, and resumes its regular rate as soon as the patient finds relief in an outburst of passion.

From the above, I am of the opinion that in the earliest stage of insanity, when the mental agitation is most acute, we should expect to find a pulse nearly approaching the normal tricrotic type, and in proportion as the excitement diminishes and the patient falls into a state of mental apathy and dementia, the pulse becomes *dicrotic*, and at last *monocrotic*, sluggish and flat-topped, as a result of the loss of irritability or paralysis of the great sympathetic system.

HABEAS CORPUS AND LUNACY.

DECISION OF JUDGE LUDLOW.

We copy from the Philadelphia *Ledger* of December 25, 1869, an admirable opinion of Judge Ludlow, of the Philadelphia Quarter Sessions. It contains a history of the case it decides, sufficient for its elucidation, and is an able exposition of the common law as modified by a late local statute. It is refreshing, amid the present loose and flawy ways and decisions of judicial officers, to find a judge, here and there, not only imbued with the old sensible spirit of the law, but possessed of the nerve to declare and administer it in the same old spirit. Judge Ludlow inspires the dry principles with feeling and eloquence, as Mansfield, Kent, and Shaw did; and reminds us of that school of incumbents of high judiciary seats whose names are famous in the memory of lawyers. We anticipate for Judge Ludlow, who has not yet reached his prime, a higher position than the Court of Quarter Sessions, if we may find any hopes on such a stanch, well-reasoned, and humane opinion and decision as this.

JUDGE LUDLOW.—This writ was issued under and by virtue of the Act of Assembly of 20th of April, A. D. 1869.

Admonished by the character of the class of cases to which this one belongs, of the delicate nature of the duty about to be performed, we have determined, on behalf of George W. Draper, the real party in interest, to lay aside the strict rules of law which guide us in determining most causes of a criminal and even civil nature, and to deal judicially with this unfortunate man as one would treat a suffering brother, child or friend; or as, in the Orphans' Court, we would protect and guard the best interests of the minor children within our jurisdiction who are wards of the Court.

Proceeding to the investigation of the case, two or three thoughts naturally strike the mind upon reading the act of Assembly under which these proceedings have been instituted. And this is so, not indeed because the distinct provisions of the law are, when considered separately, new, but because the act groups together principles of action of vital importance, and thus presents the subject for consideration.

We see in this law the vast difference between a civilized free people and a savage nation. Here provision is made for the insane; they may be placed legally "in a hospital," that is, not in a prison, but "in a building in which provision is made for the sick, the wounded, lunatics, or other unfortunate persons."

The insane, no longer cast out upon the cold charity of the world—a charity often harder than adamant and colder than ice—are to be treated as human beings, and the malady with which they are afflicted is to be conquered by the advice, care and skill of scientific men, whose lives are devoted to a special object. It may be that a permanent cure can be effected; but if this be

impossible, human sympathy and tender care yet follow the unfortunates, and sympathetic benevolence at least tends to alleviate a dreadful malady, or exercises a wise and beneficent restraint, until death closes the sufferings with the existence of the patient.

The second thought suggested by reading this law is, that all power over the person is liable to abuse, and, therefore, no man or women shall be sent to even a hospital for the insane, unless upon certificates of personal examination by two physicians, signed and acknowledged before "a magistrate or judicial officer, who shall certify to the genuineness of the signature and the respectability of the signers;" or upon the order of a court or law judge, after the examination, as specified in the act.

The right of personal liberty is thus jealously guarded, and the tendency to abuse is checked and restrained by the certainty of detection.

The third thought embodied in the law is, that any law judge may exercise a *quasi visitatorial power*, for any respectable person may swear to a statement that an individual is not insane, and thereupon the writ of *habeas corpus* must issue.

No board of directors, no physician or assistant, however scientific or experienced—not even the walls of the building itself—can withstand the power of the great writ. Through its agency the law knocks at the door of the Asylum, and asks why a human being is restrained of his or her liberty? An answer must be made, and an examination will take place—not in the dark, but before a judicial officer and at a public hearing.

The elements of advanced civilization among a free people are clustered together in this law; for here we have a hospital, a home for the sick recognized by law, the personal liberty of its inmates guarded, and a power

existing which may at any time be exercised to prevent and arrest abuse, and inforce clearly defined rights.

This brief analysis of the act of Assembly must satisfy any one that this remedial statute, if properly expounded, is a most beneficent one. If, however, its provisions are used for the purpose of unwise experiment, and at the dictation of irresponsible persons, it will be fatal in its operations, not only to the institutions named, but also and especially to the unfortunate beings who may from time to time inhabit them. Next to the dreadful malady, no greater calamity can befall an insane man and his family, than to exhibit in detail his weakness to the gaze of the public, by an examination in court.

We have spoken of a hospital for the insane as a home for the sick and not a prison, and in giving an interpretation to the law this thought must not be overlooked.

This institution is like in many respects other public charities, but inasmuch as its patients are afflicted with a subtle and peculiar disease, its powers in practice exceed those of other Asylums in that, while it treats disease, it must of necessity exercise restraint.

There are three reasons why this should be so: First, because the anxiety and distress of family and friends are thus alleviated; secondly, because the community is thereby protected; and thirdly, the patient is guarded and cared for, and, it may be, cured. When it appears by any evidence that a person has been sent to the Asylum from a corrupt motive, or is unnecessarily restrained of his or her liberty, then indeed the potent agency of the great writ cannot be too speedily invoked; but when in any case it appears that no motive exists except the kindest and most benevolent, for the separation of one member of the family from all the rest, or of

an individual from society, the Court ought to act with the greatest delicacy and care, before, by discharging the patient, it inflicts what in many cases proves to be an irreparable injury.

My own individual experience upon this bench justifies this remark; for while a premature discharge has, in one instance at least, caused the most disastrous results, in many cases the advice of the eminent Superintendent of the Pennsylvania Hospital has proved to have been of the wisest and most beneficent character, and a disregard of it has been attended with nothing but unmixed injury.

While all this is to be said, it must also be remarked that in the past, physicians have not always examined patients with that deliberation and caution which is so desirable, and they cannot be too careful when called upon to sign the certificates which consign men to the Asylum; while the Superintendent and his assistants at the hospital must remember that, while many individuals may in one sense be of unsound mind, it does not always follow that they are fit subjects for the hospital. And in the management of the institution, these officers should, by repeated personal examinations, satisfy themselves of the fact, that even raving maniacs are not abused and subjected to unnecessary restraint by any person or persons, and especially by subordinate officers.

All will agree that an insane and dangerous man ought to be restrained. The difficulty arises in that class of cases in which it appears that, while comparatively harmless, the patient is not able to take care of himself, is imbecile, and yet in some respects resembles a sane man with a feeble intellect, or a mere child. How far is it justifiable to keep such persons within the walls of a hospital? The natural impulse of a sensitive

nature is at once to grant a discharge or try an experiment; and, especially is this the case, when the poor invalid has spent years in the Asylum. Will we, by following either course, do the patient a benefit or an injury?

The answer to this last inquiry involves a responsibility little dreamed of by those who are not compelled to assume it.

If there existed in this country (as I am told there exists in Europe) a class of persons who earn their living by boarding imbeciles in secluded villages, and who thus voluntarily associate with and care for the unfortunate beings who thus compose the community, the difficulty would be solved; but what are we to do here, where a discharge from an asylum means often association with the members of a family under the most distressing and injurious circumstances, or a residence at a boarding house with total strangers, and always in contact with a world too ready either to be amused at the expense of the unfortunate imbecile, or to shun and avoid his society?

I do not quite agree with the accomplished and learned counsel for the Hospital, Mr. Biddle, that it is in all respects a desirable residence for anybody, because the inmates there are necessarily subjected to supervision and restraint; but I do agree with him in the view which he takes of its admirable adaptation to the wants of the demented, as well as of the raving maniacs. Considering the fact that a system of classification exists in the hospital, and that patients of all classes are not thrown together; remembering that the most spacious buildings, well-warmed in winter, and well-ventilated at all seasons of the year, have been erected; that a library has been provided, with abounding amusements of every proper kind and description; that newspapers

are contributed freely and delivered daily to the patients who desire and are able to read them; that spacious grounds surround the institution, while horses and carriages are constantly used by the patients inside and outside the walls of the institution; and finally, remembering that the whole establishment is under the supervision of an able and experienced scientific physician, with assistants, whose qualifications cannot now be questioned; I am constrained to say that I will not turn my back upon all these advantages, and for the sake of an experiment, subject any imbecile now in the asylum to danger and to death itself, until you satisfy me that some other place has been provided equal to the institution from which you desire rashly to remove the patient.

Having said this much of the principles involved in this case, I shall now proceed to apply them to the writ before me.

George W. Draper was sent to the Hospital many years ago by his father, his mother then being alive; during the lifetime of both father and mother, for ten or fifteen years, he remained in the Asylum. At the death of his father, proceedings having been instituted for the purpose, a jury found him to be a lunatic: the report of the commission and jury of inquisition was filed on the 25th of March, 1865; on the same day the proceedings were confirmed by the Court, his brother was duly appointed committee of his person and estate, and gave adequate security, which was duly approved by the court.

These proceedings were instituted under the advice of the able and judicious counsel for the estate of the father, Mr. Joseph A. Clay.

By the will of John Draper, the father of George, the property of this son is placed in trust for his life for his

maintenance and support, with remainder to his other children should George die without issue. It is agreed by all parties before me that George W. Draper is now demented, and that he cannot be trusted in or out of the asylum without a "care-taker."

The evidence satisfies my mind that the family, and especially the committee, of this unfortunate gentleman, have acted from the purest motives, and that he has expended all that was necessary for his comfort and support.

The vigilant and efficient junior counsel for the relator, Mr. Warriner, and also his senior colleague, David Paul Brown, Esq., whose eloquence and strength, not yet abated by length of years, is still expended in defense of personal liberty, both surprised me when they hinted at the probability of a mercenary motive being at the bottom of the continued confinement of George, and also complained because the interest of the trust fund had been made to support the patient.

The object of the father in creating a trust was to provide a permanent fund for the support of the unfortunate son, and this money had been faithfully and wisely expended for that purpose; and the idea that the brothers of George continued to confine him for the purpose of preventing his marriage, was so totally at war with the admitted fact of his actual imbecility, that it hardly requires consideration.

Can it be possible that it ever entered into any man's mind that an individual who, for fifteen years of his father's life, was an admitted imbecile, and so continued, could enter into a contract of marriage? The policy of the law, for the most obvious reasons, ought to condemn any matrimonial engagement of the nature suggested.

But it is said that an experiment ought to be tried. We ask, how is this to be done?

The committee has a perfect right to say that the patient cannot live at his own home; and he must be the sole judge of his own action in this respect, for a moment's consideration will satisfy any one that his reasons may be of the most substantial nature.

Strangers, then, must take care of George. But how is this to be done, and where? we again ask. He must be under restraint somewhere, all admit. Is it likely that outside of an institution specially adapted to the wants of the demented he will receive that care and attention which his condition imperatively demands? But we are urged to take the responsibility. All this is well enough in argument, but can we forget that a mother's love bore an inforced separation from her beloved son for ten long years, and all for his good, although it tortured her maternal heart? Shall we not remember that his father, driven by the irresistible logic of facts, placed his offspring in this institution, and with most prudent foresight established a trust, and thus to this day exercises parental control?

No brother or intimate personal friend asks for our interposition.

To take a proper and just responsibility in such a case as this requires not bravery, but courage—not that quality which sometimes degenerates into temerity, and is reckless of danger, but rather that other quality which is the result of reflection, and is always cool and collected.

Where our path of duty is plain, we ought judicially to be courageous, not brave.

Bowing to that mysterious dispensation of Providence which has deprived this man of his reason, we return him to the hospital, in the hope that at some future time his committee and physicians may be able to restore him to society, or permit him without injury to

be removed from this asylum. If this lingering hope shall fail, then, in returning this patient to the institution, we solemnly charge those who shall have him in their keeping to deal very tenderly with him, as they shall answer for it here and hereafter. Thus gently led, his descending pathway shall be smoothed, and human sympathy, ever watchful, will continue to surround and follow him until the veil shall be rent in twain, and his disembodied spirit, freed from the clay of the earthly tenement, shall be ushered into another world.

There our hope and faith teach us to believe that reason will resume her sway, the apparent inequalities of this mortal life shall be adjusted by divine wisdom, and this now clouded intellect will develop capacities for culture and enjoyment as boundless as they shall be in duration eternal.

BIBLIOGRAPHICAL.

REPORTS OF HOSPITALS FOR THE INSANE, FOR 1868.—CONTINUED.

XIII.—NEW YORK. *Twenty-Sixth Annual Report of the Managers of the New York State Lunatic Asylum, for the year 1868.*

Dr. Gray reports in this Institution at the beginning of the year, December 1, 1867, number of patients 603: received during the year 382: discharged recovered 157, improved 85, unimproved 105, not insane 10: died 58: remaining November 30, 1868—men 284, women 286—total 570. No acute cases were refused admission, and no chronic cases except such as might safely be kept at their homes. Full one-third, however, of those received were in the chronic stage of insanity, or broken down in

health by disease or age. It will be seen that the proportion of cases recovered is 41 per cent. The cases discharged as not insane, were chiefly cases of intemperance, hysteria, delirium from a bodily hurt, or of reckless or abandoned character.

Dr. Gray announces in the following paragraph a fact which inaugurates another advance in the practical investigations of this branch of medical science:

I have long been convinced that the extensive field afforded by this institution for pathological investigation should be cultivated more thoroughly than could possibly be done by the ordinary medical staff, considering the limited time allowed after the discharge of other duties. I therefore felt called upon to bring to the attention of the Managers, the importance of employing a professional man of special attainments and skill in this department, to make microscopic investigations, in important cases, where post-mortem examinations could be obtained; to test the value of the sphygmograph and dynamograph in throwing light upon the morbid physical condition of the insane, and such other pathological researches as might be deemed valuable to medical science and the public generally. Dr. E. R. Hun, appointed by you to this position, is eminently qualified to perform its duties, and has entered upon the work with zeal; and we look forward in confident hope that many important facts in the pathology of the brain and nervous system will be elicited, which will contribute to the advancement of medical science.

From records carefully kept for eight years past, and statistical tables presented with this report, Dr. Gray estimates that 25 per cent. of the men, and a little over 30 per cent. of the women is the highest proportion of patients necessarily confined in hospitals that are able to work an average of six hours a day.

It appears also from other tables given, that food had to be forcibly administered to an average of 4 men patients and 16 women patients for longer or shorter periods each day during the year; also that an average of over 30 per cent of the whole number of patients were

under continuous medical treatment. Of the 58 deaths in the Institution during the past year, 10 were from paresis. It will appear that as yet no cases of this disease have ever been cured. The autopsies have been of much value in all cases where *post mortems* have been allowed. Several are given in this report.

Dr Gray devotes some space to a refutation of popular prejudices against Insane Asylums, and to a rationale of the distorted views which some patients that have been discharged apparently cured, seem to entertain in regard to the Institution in which they have been treated. It would seem that some cases, even after apparent recovery, always continue to live near the border line of insanity, and only to have substituted one object in the place of another for their fantastic prejudices.

This peculiar fact, which will be recognized by most alienists, as within their experience, is described and commented upon at some length in this report :

The aggregate of boisterous and maniacal patients in an asylum is much less than people generally suppose. The number is so inconsiderable that, when the weather is favorable, there are very few of the men who are not out of doors, either on the farm, in the garden, or the yard ; and if larger grounds were appropriated for the women, the same thing would obtain ; and these we hope some time to secure.

It is not the class just spoken of that gives the most anxiety and trouble within an institution ; but there is another class, and not inconsiderable in number, who seem to be in constant antagonism to almost everything that is done, owing to the nature of their delusions or the exaggeration, under the influence of mental disorder, of an unpleasant, fault-finding or perverse disposition. These do not realize that they should be restrained of their liberty in any way, or for any cause. Many of them think that conspiracies of various kinds have brought them to the asylum, and believe that the officers of the institution are not only cognizant of this, but, inasmuch as they detain them, are implicated in the conspiracies. Again, if they are feeble, and in-door rest is necessary and prescribed, they are apt to say that the officers are depriving them of

fresh air and exercise. If they are in a condition to be benefited by exercise, and the occupation of moderate and systematic labor, and this is prescribed, then the officers are compelling them to work for the benefit of the public; and too often the friends of such patients are inclined to sympathize with just such complaints. If the attendants are vigilant and active, and keep a constant watch over them, and report their conduct and condition, they complain of unnecessary discipline and oppressive restraint. If, on the other hand, the attendants do not notice and report their conduct and condition, but leave them to make their own statements, then they complain of indifference and neglect. If they are put on medical treatment, then they complain that they are compelled to take medicine, and are not sick. If they do not need direct medication, but simply rest, freedom from responsibility, regulated labor, diet and hours of sleep, then they complain that they are getting no medicine, and might as well be at home. These cases, discharged uncured, but so far improved as to be safe to reside in their families and be useful, almost always speak of the asylum and its workings from the standpoint of their delusions. It is unhappily true that the story of an insane person, about an asylum, is quite as likely to receive credence as that of a sane person. If insane persons speak, as they often do, of their friends as having conspired against them, of having sent them to the asylum unnecessarily and improperly, of having been abused, both by their own family and their neighbors, of their fellow church members as hypocrites, their declarations are recognized as having originated from their insanity; but if they should apply the same charges to the institution, and those having had care of them here, the credulous public is only too ready to listen, and to believe such allegations, as if those making them were truly sane, and no longer the subjects of delusion. We give the following in illustration:

A patient was committed on the order of a court, with this history given by his friends. He was without property or business, and spent his time in lounging about public places, engaged in gossiping. He was supported by his brother-in-law for many years. About sixteen years before admission, his grandfather died and left to his heirs some property, though none to the patient. He soon began to boast of his wealth; to accuse friends and relatives of conspiring against him, and of attempting to poison him to gain his property; called them villains and robbers, and accused his brother-in-law of having killed his sister. To other people he became abusive, engaged in excited argumentation, and by his con-

duct alienated his neighbors and acquaintances. For several years he remained in this state, but gradually became more insane, and at last threatened to take the lives of his friends, and carried about a loaded gun. At this time, he was brought to the asylum. Here the delusions, as given, were repeated. He was very talkative, accustomed to argue, and spoke largely and boastingly of his wealth, ability and knowledge; was careless and even filthy in dress. After a residence here of about seven years, he seemed partially to appreciate his condition, and acknowledged that he had been insane, but asserted that he was now cured. For the last year, he said little of the delusions that had been most prominent, but retained his personal peculiarities of dress and conversation till he was discharged. We next hear of this patient before a Board of Supervisors, where he was apparently treated as a sane man. He addressed the Board on the character and management of the asylum, and closed with a proposition to the Board to urge upon the Legislature the appointment of a committee, whose duty it should be to "examine the inmates of these institutions four times a year, with power to send for persons and papers, and discharge, or send to whence they came, all those not entitled to the privileges and immunities of said institutions, and report to the Legislature annually the number so discharged."

A committee was appointed to visit the asylum, and we subjoin their report :

"The undersigned committee, appointed by a resolution of this Board to visit the State Lunatic Asylum at Utica, respectfully report: That they have visited the said asylum, and carefully inquired and examined into the condition and treatment of its inmates, and are happy to report to this Board that, in their judgment, the condition and treatment of the truly unfortunate class of persons committed to that institution, and required by law to be supported at the expense of this county, in consequence of their indigence and incapacity, is in all respects comfortable and humane; that the sanitary measures of the institution are admirably calculated to promote the health and comfort of the patients, and facilitate their recovery from the terrible affliction of insanity.

"The entire absence of the dungeon and chains (so repulsive to be met with in our county-houses,) substituted by careful and constant attendants day and night, and also the absence of all means of self-destruction, together with the mild form of enforcing necessary discipline, afford satisfactory evidence that the treatment they receive is humane, safe and salutary, and contributes materially to their comfort and recovery.

"The classification of the patients, requiring those suffering under similar affliction or degrees of insanity into wards, without distinction of pecuniary circumstances, or previous social conditions in life, commends itself to the favorable consideration of the relatives and friends, and also those whose duty it is to provide by tax for their support.

"The most rigid regard to cleanliness is observed in their clothing, beds and rooms, thereby avoiding all disagreeable and offensive odors, so prevalent in apartments where insane persons are usually confined. Your committee further report that they examined those subjects chargeable to the county of —, a list of the names and times when received is hereunto annexed, and they all exhibit evidences of mental derangement, although some of them are in a convalescent condition. Your committee have failed to discover the necessity of petitioning the Legislature to constitute a State Committee or Board of Examining Physicians, to consult with or direct the present management of such institution, it being under the supervision of a Board of State Managers, composed of gentlemen supposed to be competent to superintend the affairs of the institution in a manner calculated to promote the welfare of the patients and the interests of the State. Your committee further deem it their duty to report, that the officers of the institution courteously afforded every facility to the furtherance of the objects for which the committee were appointed, and freely responded to all inquiries, exhibited the books kept by them, minutely describing the system of conducting the affairs of the institution, the treatment of the patients and the various methods adopted for the comfort and relief of those under their charge."

Others again, who are apparently recovered when they leave the institution, are, nevertheless, unable to divest themselves of the impressions received while under delusions. They may drop the actual delusions, but the misinterpreted words, looks and acts of those about them, the false judgments they have made, the unjust suspicions they have indulged are not abandoned; and though they may enter on their ordinary business and conduct it successfully, they ever after seem to live on the border line between sanity and insanity, and, under excitements or slight physical ailments, pass and recross the line. The insanity may not again be fully developed, but they will carry with them a taint, which their more observing acquaintances will recognize and understand, but which the less reflecting will not appreciate. We will illustrate this by the following cases:

A clerical gentleman, whose christian charity had been greatly disturbed by years of dyspepsia, is brought here by his friends on an order of the county judge. He is feeble in health, thin to emaciation, has no appetite, even loathes food; is sleepless, depressed under the delusion that he is utterly lost; that he has committed the unpardonable sin, mourns constantly over his state; declares that his family is coming to starvation, and that some have already perished. He distrusts everything that is done for him, but asks to be allowed to stay in the asylum, as he is safer here than anywhere else. On the ward, for a long time he is greatly confused, harrassed with doubts and suspicions; thinks his case is not understood; says, "the medicine increases his appetite, but probably subjects him to remarks;" that he "tries to realize his condition, but does not know why he talks to himself at night."

After six months he begins to improve in health, but still remains under delusions; and a month later insists that "he was brought here by enemies." After nine months he begins to take some interest in others; engages in amusements, but is still depressed and bemoans his condition. After remaining more than a year in this state, his physical health is slowly improving, his despondency gradually disappears. He writes to his family and friends, and after a few months seems to be recovered, and leaves the institution, expressing gratitude for what has been done for him. Several times thereafter he visits the asylum, and, with seeming sincerity and good will, reiterates his thanks for his restoration. Two years and five months after his discharge, he comes to the asylum complaining that he is run down in health, nervous and fearful, and begs to be admitted. After a short time, with the use of tonics and nutritious diet, he leaves in the same manner as before. The next thing we hear of our clerical friend is through a sensational book, a loose, disjointed production, full of evidence of a threatened return of his former condition. This book of the unfortunate man, written under the shadow of disease, or rather, under the illumination of a disordered fancy, he calls his experience; and it may be received by many as such, although it is but the reminiscence and reflected flashes of his insane delusions during his stay in the asylum, and is just as true and real as those, and just as worthy of confidence.

Another case is that of a man naturally arbitrary, and who has been more or less a victim of dyspepsia, but active, energetic and successful in business. Under trifling financial loss, while at the

same time suffering from somewhat depressed physical health, he broods over ills that might come, loses sleep and appetite, and at length sinks into marked feeble health; insists that he is ruined; has the delusion of being poisoned by his family, of assassination and conspiracies; that his property has been swept away; that people come about his house at night, blowing tin whistles to annoy him; and that his family is to be murdered. Finally he refused food, from fear that his family was trying to poison him; threatened suicide, and tried to secure a razor to cut his throat. He is brought to the asylum, where he is under the most painful delusions of fear; crawls under the beds to hide himself, to escape being put to death in some horrible manner; maintains that every one is changed in manner and speech toward him; that his family has all been destroyed; claims the carpets of the institution as property taken from him, and the stock, wagons and personal effects at the barn as his property. For many weeks he was in this sad condition, sustained by forced alimentation and stimulants. Finally he began to improve in health, and his delusions to lose force. In the course of a few months he seemed to have recovered, and returned to his family and business. With this man, from whom one might have expected at least gratitude, no language is too condemnatory of the institution, its officers and management, although it may be truthfully said that to their care and firmness of discipline he owes not only the preservation of his life, but his power and ability to conduct his affairs with the success of his better days.

XIV.—NEW YORK. *Annual Report of the New York City Lunatic Asylum.*

Dr. Parsons, the resident physician of this institution, reports number of patients January 1, 1868, 912—men 320, women 592: admissions 668: discharges 410, deaths 135: number remaining January 1, 1869, 1,035. Of the discharges 206 were recovered, 118 improved, 82 unimproved, 4 not insane. This makes the per centage of cures on admissions $31\frac{1}{2}$ per cent.

Of the 135 deaths, 22 were from exhaustion: paresis 19, phthisis 10, scrofulitis 9, suicide 5. Scrofulitis is something which should be rendered impossible in our hospitals, and may be with sufficient provision for ventilation and exercise. Dr. Parsons also complains of the

inadequate arrangements for cooking—an important point. During the summer of this year a new pavilion was erected for the accommodation of 70 or 80 quiet patients, which, when not thus needed, may be used for epileptics and paralytics.

It appears that the number of patients reported this year exceeds that of last year by 123, and is 440 in excess of the normal accommodation of the Asylum.

It is manifest that Dr. Parsons is justified in an earnest appeal for additional buildings, on the score of safety to the patients he has already in his charge. In fact, we are glad to see that a commission has been appointed for this purpose, of which Dr. Parsons and one of his assistants are members.

Dr. Parsons reports 45 post mortem examinations, and appends a valuable synopsis of their results.

We also quote the following very just and discriminating remarks on the position and duties of *attendants* in our hospitals for the insane.

To the attendants, on whom devolves the immediate care and supervision of his patients, the medical superintendent of our asylum for the insane is peculiarly dependent for his success. It is not sufficient that they obey the letter of certain rules that may be adopted for their government and instruction; they must also be pervaded with the spirit that animates the physician, in order that his influence may be exerted upon his patients, even in his absence; their bearing, the tone of voice, and the manner in which they carry out the instructions of the physician, are all important, much more important, indeed, than the medicine administered or the regimen enjoined. Hence, it is, that so much stress has been laid by superintendents of asylums on the careful selection of attendants, with a view to their adaptation to the delicate and difficult duties entrusted to their charge. Hence, it is, that they desire attendants to be, to the fullest possible extent, under the magnetism of their own personal influence. Hence, it is, that they frequently discharge attendants, not for any positive fault, not for any neglect, but simply because they are found wanting in these peculiar characteristics required for the successful management of the in-

sane, in tact, in the ability to catch and carry into practice the wishes and *animus* of the physician. The duties of faithful attendants are difficult, and their labors arduous. They are required to be on their post of duty by night, as well as by day; they have the insane for their constant associates, and are often exposed to their blows and buffetings, or to abusive language and untruthful complaints, that are a severe trial to their equanimity, inasmuch as the patient often has the appearance of being actuated by malice quite as much as by disease. The friends of patients also often believe their unfounded complaints or untruthful stories, to the great chagrin and annoyance of the attendants, and the investigation rendered necessary by these complaints, is a still further source of discomfort. To those attendants who have faithfully endeavored to fulfill the difficult duties and requirements of their position, the highest meed of praise is due and is gladly accorded.

XV. NEW YORK. *Annual Report of the Resident Physician of Kings Co. Lunatic Asylum for year ending July 31, 1869.*
Flatbush.

Dr. Chapin reports patients in Asylum, Aug. 1, 1868, 532—men 218, women 314: admitted during the year 286: discharged recovered 106, improved 80, unimproved 22: died 53: remaining July 31, 1869, 557. Number of employés 81. Six of the deaths were from phthisis, 6 from paresis, and 8 from paralysis.

Additional wings for this Asylum were commenced in May, 1868, and completed in July of this year.

The Asylum, as completed, has a frontage of 683 feet; lineal measure, 1,105 feet. Including the basements, the centre building and cross wings or transepts, are five stories, and the extension or connecting wings, four stories high. The centre building and two wings, were commenced during the fall of 1853, and finished in October, 1855; two additional wings of the same dimensions, were commenced on the eighteenth day of July, 1860, and finished July 1, 1861. The new wings are considerably larger than the old; each of the new, measuring 442 feet; each of the old, 327 feet, around the outer walls. The Asylum will now accommodate seven hundred patients.

Changes have been made in the heating and ventila-

ting apparatus, the heating being done by steam in coils placed in one large air chamber, and the ventilation by a fan through a duct leading to the hot air chamber, whence the air rises to the corridors and passes into each dormitory through an opening over the door, and thence as it cools into flue openings near the floor, the ventilating flues being built in the same stack with the hot air flues.

Dr. Chapin adds to his report this year some general observations upon the characteristics of the insane, which will be of interest and instructive to the popular mind. We quote what he says of "responsibility and self-control."

However the laws of various countries and states differ, as to the legal accountability of their insane—and in respect to some forms of insanity, they do differ widely—in all well ordered Asylums, they are conceded to be irresponsible beings. Yet, in seeming contrariety to this fact, the whole scheme and possibility of Asylum management is founded upon the limited responsibility, or power of self-control, common to a majority of the inmates. But for the fact that the insane generally know right from wrong, and mainly prefer to do right, they could not be associated in such large numbers as they are, at the present day; and solitary isolation, as of old, would still be the rule, in place of being as now the exception. The faculty of self-control may, of course, be diseased, like the other faculties, and in some forms of insanity it is the one chiefly affected; but usually, save during a paroxysm of high excitement, the insane are capable of exercising self-restraint, in a greater or less degree. According to the measure of their capacity in this respect, are they deemed to be virtually, though in no sense, penally, responsible for their conduct. By such estimate, are they allowed or denied, such privileges as can be accorded in an Asylum, and precisely in proportion to their power of properly appreciating them. They are thus, and in every way, stimulated and encouraged to endeavor to regain their power of self-control.

The following striking case of "self-consciousness and cunning" is given:

One of the surest evidences of convalescence is the disposition of the insane to talk about their own delusions. Some cunningly conceal their delusions, or allude to them as fancies of the past, under the impression that by so doing, they may hasten their release from confinement. In this, they have sometimes succeeded, as the following case will illustrate. A lady strongly predisposed to suicide, after having made several unsuccessful attempts in the institution where she was confined, conceived the idea of pretending to recover, and when released, to effect her object. She studiously watched the indications of convalescence and ultimate recovery of those about her, and determined to imitate them; but fearing lest her purpose might be suspected, she took care to proceed with the utmost caution. The deep dejection which had long characterized her demeanor, began gradually to give place to an assumed cheerfulness. She very soon affected an interest in everything going on around her, and after the manner of convalescents, spoke freely and feelingly of her strange infatuation. She also wrote hopeful letters to her husband and children, in which she cautiously refrained from betraying her impatience to be released, but expressed herself as willing to remain in the Asylum until she should be believed to have recovered. This time at last arrived, and she was removed. On the very first night after she reached her home, when all were wrapped in sleep, she stole silently out and sought to end her life by drowning. But in this attempt she was again happily destined to be frustrated. It was past day-break when she reached the river, which ran several miles from her residence, and a laborer going early to his work, heard her involuntary shriek as she plunged into the water and rescued her. She was, of course, returned at once to the Asylum, where she still remains. On the way back, she confessed to her husband, and afterwards to the officers of the institution, that her slow and gradual improvement and final recovery, were all a pretense, designed to procure her release from confinement, with the pre-determined purpose of attempting her self-destruction, in the manner above narrated.

Many of the public not familiar with this subject, often wonder that so many patients can be kept together without restraint in one hall. Dr. Chapin puts the explanation, or perhaps rather the fact, very clearly.

The inmates of Asylums for the insane are unequal to any general combination, or concert of action. Two individuals sometimes

conspire together to effect their own escape, but very rarely more than that number, enter into the plot; and in case of the two individuals, usually one of them is but a pliant tool of his more cunning and determined associate. It is also equally rare for the insane to combine for any mischievous or rebellious purpose. In every Asylum there is always a considerable per centage of turbulent, mischievous and destructive patients, but they seldom aid each other. In case of a difficulty between a patient and his attendant in which there may be a struggle for the mastery, as occasionally happens, if either is aided by the lookers on, it is the attendant, and not the patient, although perhaps but a day or an hour previous some of those thus assisting may have had personal altercations with the same attendant. However the insane may regard themselves as the victims of injustice, without or within the Asylum, they seem not to doubt, as indeed they often assert, that their companions within the Asylum are very proper subjects of surveillance and restraint.

XVI. NEW YORK. *The Willard Asylum for Chronic Insane, at Ovid.*

The report of the trustees of this Institution made to the Legislature Jan. 27, 1869, stated that the Asylum buildings or part of them were expected to be in readiness to receive patients about the 1st of May or June, and asked an appropriation of \$51,015 for current expenses, as follows:

Salary of Superintendent,.....	\$3,000
" assistant physician,.....	1,500
" matron,.....	500
" steward,.....	1,000

" apothecary, \$30 month,.....	\$360
" clerk,.....	500
" assistant matron,.....	144
" engineer,.....	1,000
" two firemen,.....	600
" nine male attendants for nine months,..	1,944
" nine female " " " " ..	877
Expense for maintenance of 300 patients for nine months,.....	23,400

(Over)

Labor in kitchen and wash house,.....	600
Drugs and furniture, apothecary shop,.....	400
Sewing machine,.....	100
Advances for clothing for patients,.....	1,500
Stationery, books and printing,.....	1,000
Incidental fund for the Superintendent and steward,.....	1,000
	<hr/>
Twenty cows, at \$75,.....	\$1,500
Twenty young cattle, at \$45,.....	900
Oxen and cart,.....	300
100 sheep,.....	400
Swine,	200
Poultry,.....	50
Three plows,.....	30
Two harrows,.....	25
Roller,.....	30
Wagon \$125, harness \$45,	170
Sleighs,.....	100
Farming tools and implements,.....	250
Horse team,.....	600
Corn sheller \$15, horse fork \$20,.....	35
	<hr/>
For tile and draining 50 acres of land,.....	\$2,500
Repairing fences,.....	1,000
Building barn and repairing,.....	1,000
Labor on farm, including foreman, 450 acres,....	2,500
	<hr/>
Total,.....	7,000
	<hr/>
	\$51,015

The report of farming operations shows that of the \$1,000 received from the Comptroller in 1868 for such purposes, \$805.30 had been expended for implements, and for putting in and harvesting crops: and mentions that there were 1,000 bushels of wheat on hand and 16 acres sown to wheat. The trustees it will be observed, up to the date of this report, had had only the care of the farm. The buildings in process of erection have been in sole charge of a building commission, consisting of Dr. John B. Chapin, Dr. Julien J. Williams and Dr. Lyman Congdon, which commission under the law or

ganizing the Institution, were to retain such charge until the building should be reported as ready for the reception of patients.

Since this report and in the month of September last, a portion of the buildings were declared ready for occupancy, and patients began to be transferred to them from the county-houses.

XVII.—NEW YORK. *Report of the State of New York Hospital and Bloomingdale Asylum for 1868.* New York.

Dr. Brown reports the number of patients in this Institution January 1, 1868, 161: admitted since 136: discharged recovered 55, improved 48, not improved 17: died 20: remaining January 1, 1869, 157.

Dr. Brown congratulates the Governors of the New York Hospital on their recent purchase of an eligible property of 300 acres at White Plains, for eventual occupation by the Asylum.

This is a measure so long and so greatly needed for the true efficiency and the maintenance of the prosperity of the Institution, that it is to be hoped it may be carried into execution as soon as possible.

XVIII.—CONNECTICUT. *Third Annual Report of the Board of Trustees of the General Hospital for the Insane of the State of Connecticut, at Middletown.*

Dr. Abram M. Shew is the medical superintendent of this newly established Institution, which was so far completed as to be opened for the admission of male patients on the 30th of April, 1868, just 13 months after the first work was begun in excavation of the site.

Dr. Shew reports for the eleven months ending March 31, 1869, number of patients admitted 268—men 165, women 103, 24 being “private patients.” The discharges were, recovered 25, improved 11, unimproved 6, not insane 2; died 15: remaining in hospital March

31, 1869, 209. As is usual in new institutions, a considerable proportion of those admitted were aged and chronic cases.

It is gratifying to see the promptness with which the action of the Connecticut Legislature in reference to a new State Hospital has been taken and carried out. The structures already finished are a centre building 60 feet wide by 120 deep, four stories high, containing the kitchens, dining-rooms, store-rooms, reception-rooms, offices, and officers' quarters, and a chapel (in the third story,) 42 by 58, and 22 feet in height. Adjoining are two wings completed for patients of each sex, already filled to their utmost capacity. The plans provide for additional wings to a future extension in all of about 768 feet. The length now finished is 308 feet. The generous recommendation of the Governor of the State to the Legislature preceding the date of this report, has been as generously met and responded to.

XIX.—NEW HAMPSHIRE. *The Report of the New Hampshire Asylum for the Insane, to the Legislature, June Session, 1869.*

Dr. Bancroft reports in the Asylum May 1, 1868, 235 patients: admitted during the year 95: discharged 71: died 22: remaining May 1, 1869, 237. Of the discharged 42 were recovered, 20 improved, and 9 unimproved. The number of admissions and the average number in residence were not quite up to those of the year previous. The recoveries are 44 per cent on admissions, and over 80 per cent of the acute cases. The completion of the new building erected by means of the Kent donation, enables a distribution into nine classes of each sex. A new chapel building has also been constructed, with cellar for storage, kitchen, bakery, &c., in the first story, and sewing-room and sick-rooms in the 2d, with the chapel 64 feet x 46 and 18 in height, occupying the 3d story.

New Hampshire is to be congratulated upon an Institution quite adequate to her wants.

XX.—*NEW JERSEY. Annual Reports of Officers of the New Jersey State Lunatic Asylum for 1868.* Trenton.

Dr. Buttolph reports the number of patients at the beginning of the year at 450: received since 265: discharged recovered 77, improved 56, unimproved 12, not insane 1: died 50: remaining November 30, 1868, 520—men 234, women 286, of the whole number 89 being private patients. The whole number under care was 94 more than in the previous year, and some 20 in excess of the real accommodations of the institution. In our last number we noticed the Report of a Committee appointed to select a site for a new Institution, and their conclusions in favor of locating it on grounds adjacent to the existing one.

We subjoin Dr. Buttolph's remarks in this Report on "Medical Treatment."

While it is undoubtedly true that a large number of the chronic cases in an institution of this kind, whose minds are permanently disordered, but who enjoy good general health, need little medical treatment, yet a portion of this class, and a large number of those more recently affected, are much benefited by judiciously applied remedial means.

Among the classes of articles more generally called for in the treatment of the insane, are those adapted to regulate the digestive organs, to improve the general strength and tone of the system, and such as secure greater tranquility of the nerves and induce sleep. In regard to the latter effect, in particular, it may be said, that in many cases when the rest has been much disturbed in connection with the attack and continuance of the disorder, about all that is required after the advantage of change of place and association from home to the institution has been accomplished, is to secure several hours quiet sleep in the night, with shorter periods in the day, for a few days or weeks in succession. This seeming to be the one thing most needed to restore the brain to its healthy functional action, much discrimination and care, however, are often required

to enable the practitioner to select the remedy best adapted to accomplish this object. Indeed, it can only be done in some cases by trial only, or by aid of that practiced skill acquired by long experience in the treatment of this class of diseases.

As an illustration of this, it may be mentioned that in some extreme cases of maniacal excitement, attended by great wakefulness, exhausted strength, &c., and in which ordinary anodyne treatment has failed to secure the much needed rest and sleep, a liberal stimulant of warm milk punch, frequently repeated, will overcome all the barriers to repose, and the worn-out sufferer will awaken after several hours of sleep, feeling as if he had been transported to a different world, in the interval of his consciousness.

In many cases of melancholia, also, in which the person suffers from morbid apprehensions of various kinds, such as to prevent rest, either day or night, anodyne remedies are highly useful, indeed quite essential to success. By inducing forgetfulness, in sleep, of the painful impression under which the mind labors, the remedy often works slowly, but surely, for the relief of the patient.

In many chronic cases, also, in which there is morbid wakefulness, the use of this class of remedies is of great service to the patient, and incidentally to many others, if in an institution, by preventing him from passing his nights in noisy vociferation and unrest.

XXI.—OHIO. *Fourteenth Annual Report of the Southern Ohio Lunatic Asylum for the year 1868.*

Dr. Gundry reports in Asylum November 1, 1867, 178: received during the year 102: discharged recovered 64, improved 11, unimproved 12: died 11: remaining November 15, 1868, 182. Adopting the simple classification of all cases into mania and melancholia, Dr. Gundry declares the per centage of recoveries in each as very nearly the same, for the 14 years since the establishment of this Asylum. Out of 970 cases of mania there were 558 recoveries—57.52 per cent. Out of 475 cases of melancholia and depression there were 251 recoveries—52.88 per cent.

The average period of residence in the Asylum of those who recovered was 6.17 months.

As illustrating the comparative results of prompt treatment and delay in sending to the hospital, the Doctor gives the following :

The following figures exhibit, at a glance, the close connection between early hospital treatment and the prospect of improvement ; how, as the period is prolonged between the attack and appropriate treatment, the chances of recovery diminish :

1 month's duration,	470 admissions,	320 recovered, or	68.08 per ct.
2 " "	189 "	126 "	66.66 "
3 " "	135 "	81 "	59.21 "
4 " "	76 "	45 "	60.00 "
6 " "	138 "	73 "	52.89 "
12 " "	190 "	87 "	45.78 "
2 years'	" 139 "	45 "	32.37 "

There is no doubt, therefore, that when it is decided upon by the medical advisers that hospital treatment is necessary for a particular case of insanity, immediate steps should be taken for the admission of that patient into some proper institution, and that delays in such matters are more than ordinarily dangerous. But I am far from wishing to be understood as recommending that all classes of insanity should be brought to the hospital. Some could undoubtedly be cared for as well and as effectually at their own homes. In these, injury rather than benefit may result from the removal—*injury* not so much perhaps in the prevention as in the delay of ultimate recovery. This class of cases is perhaps not very large, though I suspect more numerous than generally supposed ; but its existence should induce the greater care and discrimination in the selection of patients for hospital treatment. Again, the circumstances surrounding the patient will necessarily exercise much influence in the decision, for the question is not in some instances whether that particular case could be treated at home, under favorable circumstances, but whether it could be cared for in that *particular* home, the hospital being the only alternative. It is not a light matter to send away a relative or friend, prostrated by the most terrible affliction which can befall humanity, and many matters should be carefully canvassed, before a decision can be arrived at safely ; but the consultation, though thorough and comprehensive, need not be prolonged, and the decision, if for removal, should be carried into effect without due delay. It is not after every other means have failed, that the hospital should be tried, for then it enters upon its task under the greatest disadvantages.

Two new wards were expected to be completed before the next Report, and Dr. Gundry urges an increase of the medical staff, which now embraces but one assistant physician. He also repeats his recommendation for the purchase of more farm land.

XXII.—OHIO. *Fourteenth Annual Report of the Northern Ohio Lunatic Asylum for the year 1868.*

Dr. Stanton reports the number of patients October 31, 1867 as 149: admitted since 148: discharged recovered 87, improved 18, unimproved 19: died 15: remaining November 15, 1868, 158—men 71, women 87. Of the number admitted, 125 had been insane less than one year. The asylum has refused no recent case, and has managed to avoid the necessity of sending away any chronic ones. Two new wings have been added, which came into play just after the destruction of the Central Ohio Asylum in October, 1868, 120 of whose patients were accommodated in this Institution.

XXIII.—KENTUCKY. *Forty-Fourth Report of the Kentucky Eastern Lunatic Asylum at Lexington, for the year ending September 30, 1868.*

Dr. Chipley reports remaining October 1, 1867, 258 patients: admitted since 110, of which 25 were negroes: removed 8, eloped 4: died 18: discharged recovered 18: remaining October 1, 1868, 320. The per centage of recoveries is small, as 73 of the admissions were after the 1st of July, when the new buildings were opened, their treatment having thus lasted but about six weeks up to the time of the report. By a law of 1867, an enlargement was authorized to provide for 320 additional patients. The new buildings consist of a department for females, 440 feet long, with centre building four stories, upper building and wings three stories; another building for negro lunatics,

85 feet long, three stories, laundry, boiler-house, and gateway. Dr. Chipley states that the present accommodation provides for 250 white men, 200 white women, and 70 negroes, 35 of each sex. He has some 200 unoccupied beds yet, and believes there will be no further call for enlargement for some years to come.

XXIV.—INDIANA. *Twentieth Annual Report of the Indiana Hospital for the Insane, for the year ending October 31, 1868.*

Dr. Lockhart reports patients at close of preceding year 291: admitted since 268: discharged cured, 137: improved 44, unimproved 52, died 35: remaining Oct. 31, 1868, 291.

The summer capacity of this hospital is 280. The usual complaint of overcrowding is repeated. The completion of a new north wing, as well as a new chapel, forms a great addition, but Dr. Lockhart estimates that four more hospitals like this are required to accommodate all the insane of the State. The commissioners, we see, recommend a trial of "Asylum Cottages" for the chronic cases, and cite the example of the Melbourne Lunatic Asylum (in Australia.) The profession however mostly regard this plan as empirical.

Dr. Lockhart states that over 400 of the patients during the year have been under medical treatment. A more exact classification has been obtained here by dividing the "long halls" with partitions.

We observe this hospital is supplied with water from wells, which are said to give a sufficient supply. Dr. Lockhart very properly asks that steps be taken to light it with gas instead of the dangerous "Kerosene"—something altogether too dangerous to be trusted among insane people.

Dr. Lockhart has retired from the charge of this institution, and Dr. O. Everts, of Michigan city, has been appointed in his stead.

XXV.—MINNESOTA. *Second Annual Report of the Minnesota Hospital for the Insane for the year 1868.* St. Peter.

Dr. Bowers, acting superintendent in the interim succeeding the lamented death of the late Dr. Shantz, reports the number of patients at the beginning of the year as 84: recovered during the year 47: discharged recovered 8, unimproved 1: not insane 3, eloped 2: died 9: remaining November 30, 1868, 108. The opening of this hospital brought together a large number of chronic and demented cases, Dr. Bowers estimating that only about 30 of the 108 reported are in the curable class. Dr. Bowers reports an interesting cure of the opium habit.

The construction of the building according to the original design is still in progress, and in the meantime preference is given to admissions to recent cases. As successor to Dr. Shantz the trustees elected Dr. Cyrus K. Bartlett, of the Northampton Asylum, who was expected to assume charge in December last.

XXVI.—SOUTH CAROLINA. *Report of the Regents of the Lunatic Asylum of the State of South Carolina for 1868.* Columbia.

Dr. T. W. Parker reports at the beginning of the year 187 patients: received since 82: discharged cured 50, eloped 2, removed 2: died 11: remaining November 1, 1868, 204, of which 52 are private patients. Among the admissions were 25 blacks, which class have been admitted to this Asylum for more than twenty years. An additional building has recently been put up for their use, and is now fast filling up. Dr. Parker's percentage of cures is certainly very encouraging. He urges that a large addition should be made to the present farm of 60 acres, and states that "a large proportion of the patients take pleasure in the cognomen of 'farm hands,' and require no persuasion to engage in work."

Dr. Parker gives a full list of his patients with date of admission, age, sex, civil condition, residence, nativity, length of time insane, form, cause, and present condition. We notice he reports several cases of "moral insanity," some of which, under "cause," he describes as "hereditary."

XXVII.—TENNESSEE. *Reports of the Tennessee Hospital for the Insane, November, 1867.* Nashville.

This report received since the publication of our last number, covers the period from April 1, 1865, to Oct. 1, 1867.

Dr. Jones reports the number of patients at the former date as 170: received up to the last date 263—men 163: discharged restored 92, improved 44, not improved 5, eloped 9: died 36: remaining October 1, 1867, 247. Besides these, 29 negroes were received and treated, of whom 3 were cured, and 2 died. An additional building has been provided for this class since the last Report. Within the same period, we are glad to see this Asylum has done much to replace its losses and damages by the war.

Dr. Jones says:

Within the period of this report, we have made a house for servants, with eight rooms, remote from the Hospital; have built a large two-story porch, 56 feet long; have added a story and roof to another porch; have renovated that portion of the house formerly occupied by servants, putting the rooms and floors in thorough repair; have made a beautiful chapel of a large unsightly drying room; have substituted a considerable portion of tin roofing for decayed and dangerous shingle roofs; have had the roofing of the Hospital, laundry, smoke-house, and elsewhere, painted, and half of it twice; had the interior and exterior of the entire Hospital painted, and most of it several times; have extended drives, and built about four miles of cedar post, plank, and picket fence; have repaired and made additions to an old farm-house, so as to provide a temporary Hospital for the colored insane, have thoroughly repaired

the gas-works, repaired boilers once or twice, dug two wells, made two large and invaluable airing courts—one for those of each sex—built a blacksmith-shop, rebuilt a stone spring-house; have bought a piano for the centre building, a good Sunday School Library, and a Cabinet Organ for our new and elegant Chapel; have bought a large and well built ambulance, and a billiard table for the use of patients; and to all these, should be added expenses incident to purchasing stock substituted for twenty-two head of cattle, and five horses and mules, which were stolen from this charity; purchasing beds, bed-steads, table-ware, and furniture of every needed description, for three wards of this Institution, not occupied when I came here, and refitting these wards; as well, also, as stoves, beds, and every necessary outfit for the Asylum for the colored insane. And to all these may still be added about \$500 for carrying eight patients to their friends and homes in other States, and a considerable amount incident to increase of officers and attendants, as well as the increase of salaries of almost all subordinates.

Since the war, there has not been a dollar appropriated by the Legislature for improvements and repairs, but only for "support and maintenance." For now more than five years, all the money used here has been charged in the current expense account, and yet, within the time, something like \$18,000 has been expended in improvements and repairs, and almost two-thirds of that amount within the last two and a half years.

Dr. Jones incorporates in this report his answer to the questions proposed by the McLean Asylum as to the use and benefit of chapel services, (which he highly approves) and also to the question from the Trustees of the Illinois State Hospital in relation to the subject of mechanical restraints, which, of course, as in all other institutions, he is obliged to use to some extent.

XXVIII.—MISSOURI. *Eighth Biennial Report of Missouri State Lunatic Asylum for the years 1867 and 1868.*

Dr. Hughes reports for two years, number of patients in Asylum November 26, 1866, 266: admitted in two years 299: discharged recovered 81, improved 27, stationary 14: died 74: remaining November 26, 1868, 369. The oldest of the patients dying was 83, the

youngest 7 years: the oldest remaining is 76, the youngest 5 years. Various substantial improvements are making from time to time. Gas has been introduced, and reservoirs for water have been constructed, with a capacity of over one million gallons. In relation to one branch of repairs, Dr. Hughes says:

It is to be regretted that the means at our command would not permit us to go further with the painting. In a large building like this, painting should be going on constantly. In an economical point of view, no expenditure is so judicious as that made for paint. Our halls cannot be whitewashed, because the patients would rub off the wash as fast as applied, besides painted walls are curative of insanity, especially if their colors are brilliant, and dissimilar on the different halls. They please the eye, and avert the thoughts of patients from the subject of their delusions.

He urges the introduction of tramways from the range to the dumb waiters as a yet needed improvement, and remarks justly upon the importance of the culinary department in its hygienic aspect. He also makes other recommendations all of which are greatly needed, and few of which are dispensed with in any good hospital, among them precautions against fire, sufficient means of egress, better ventilation, musical instruments for sundry halls, a cottage infirmary, &c.

BOOKS AND PAMPHLETS RECEIVED.

Address Delivered before the Medical Society of the State of Pennsylvania at its Annual Session, June, 1869. By JOHN CURWEN, M. D., President.

Dr. Curwen, as many of our readers know, is the Superintendent of the State Hospital for the Insane at Harrisburgh, Pa. His address is mainly upon the symptoms and general treatment of insanity in its various forms. Dr. Curwen is a strong believer in the

doctrine of moral insanity. We give his remarks in full on this subject:

Many interesting points in mental medicine cannot now be discussed, but it seems proper to state distinctly the views on some disputed subjects, held by those whose long experience and acknowledged ability in this particular branch of our profession entitle their opinions to be received with deference and respect; and the most knotty of these points, and that on which most misapprehension prevails, is that of the so-called moral insanity.

The mind of man is acknowledged by all who have treated of the subject to be formed of two different classes of powers or faculties: the intellectual, comprising the memory, the judgment, the imagination, and the reason; and the moral, classed as the affections, passions, emotions, etc., and that the proper healthy action of mind, and its true and regular development is found, when these powers are carefully and thoroughly trained and kept in due subordination, so that the intellectual shall not be advanced at the expense of the moral, nor the moral be cultivated to the neglect of the intellectual. All will admit that this distinction is not so carefully observed in practice as it should be; but it is too often the case that the intellectual are highly and urgently stimulated, while the moral are left in the background, or attain undue, unnatural prominence, by neglect to educate them properly; and the more baleful passions gain the ascendancy and control, and direct the individual. No one will for a moment deny that the intellectual powers by themselves may, at any time, become disordered, while the moral powers may not appear to be in the least disturbed; but this is not the usual result. In the same way we can readily imagine that the moral, emotional, or affective powers (for each of these terms is used to express the condition referred to) may also become disordered, so that the individual will be guided to an entirely different line of conduct from what he was previously accustomed to pursue, and the intellectual faculties may not appear to be involved. But the rule to be observed in deciding on these cases is the same as that previously laid down in reference to the general diagnosis of insanity, that the individual must be compared with himself as he was in a previously healthy state, and not with some imaginary moral standard set up by the person making the examination.

A man has always led a correct, moral life, has been honest and truthful in all his relations, has been scrupulously exact in his dealings with his fellows, kind and indulgent in his family, pleasant

and agreeable as a neighbor, and in all the various relations of life has been considered correct and honorable.

Such a man is attacked with some fever, or experiences some reverse of fortune, which so acts on him as to injure his health, and it is perceived before long that he has become irascible and quarrelsome, that he no longer attends to his duties as a husband, a father, or a neighbor as he had done, that he is not careful to observe that decorum in the family of which previously he had been such a strict exacter, that he engages in foolish and improper enterprises and speculations, that he no longer observes that honor and scrupulous regard to truth which he had before exhibited, that, in a word, his whole conduct and manner are the precise reverse of what he was before: while at the same time his conversation betrays no incoherence in his ideas, he gives utterance to no foolish expressions or delusions, but is sharp, shrewd, and apparently very exact in most of his business arrangements.

Will any one deny that here is not a disordered condition of the moral powers with no observable derangement of the intellectual? and if the moral powers may be and frequently are thus disordered, have we not an insanity of the moral powers as fully developed as in others we have an insanity of the intellectual? It is to be carefully observed that this condition is not a steady growth from bad to worse, from a bad life and depraved habits to one much worse, but it is a total change of the whole conduct and character, that the man is as much the opposite of his former self in all his moral relations as it is possible for him to be, and that he now manifests traits of character and a course of conduct which no one who knew him before would ever have believed him capable of exhibiting. No evidence of delusion or other impairment of the intellectual faculties can be clearly discerned, unless we take it as an evidence of intellectual weakness that the man cannot see the exceeding incongruity between his present course of conduct and that which formerly rendered him so much honored and respected by a large circle of friends and acquaintances. In truth, no one can discern any true delusion in such cases in their earlier stages, though such delusions may arise in course of time; but we are not justified in claiming the existence of such to establish a theory: but we must regard the case in the light we have at the particular time we are examining it, or are called to give testimony on it in a court of justice. We will thus be led to admit distinctly a disorder of the moral powers, which may be called moral, emotional, or affective insanity, as the views of the person may dictate. Our clear duty

as medical men, seeking only the truth, is to take the facts of the case as we find them, and decide in accordance with those facts and the best information on the subject we can obtain. We cannot be justified, and do our duty conscientiously to the community and to ourselves, if we allow any special theory to turn us from the true course indicated, and yield to prejudice or clamor.

But it is urged there is a large class of cases manifesting a disposition to various misdemeanors and violations of the law from homicide to larceny, from the penalties of which it is sought to relieve the individual by the plea of insanity, and thus open a way to excuse all who have committed crime. The abuse of any good thing is no argument against its proper and legitimate use, and thus the abuses of the plea of insanity are no valid reason for the rejection of what rational medicine and sound philosophy alike dictate to exist, and require to be treated as disease. There are undoubtedly cases which seem not to manifest any mental disorder, but where the whole life and conduct is a series of moral disorders and incongruities. In these cases, traceable by rigidly strict and diligent examination to some physical disease or disorder, shown by the peculiarities of conduct and character, there will almost invariably be found some morbid irritation, some arrest of development or improper indulgence in some vice, some want of the economy which will be evidence of the disordered condition of some organ, the healthy action of which is necessary to the proper exercise of the moral or mental powers, or the result of a proper insane temperament.

We do not acquiesce in this argument and opinion, but as our readers have already our views on moral insanity, we are not disposed to make a re-statement in the form of criticism. We are glad to commend the following, but regret that the Dr. did not include also clinical instruction :

In the arrangement of the studies of those from whom the ranks of the profession are to be recruited too little attention has been given to the subject of mental disorders, and it is time that our medical schools should supply this desideratum, by providing for a full course of lectures on mental disorders and the jurisprudence of insanity.

Pepsin, its Physiological and Therapeutical Actions. Remarks made before the New York Medical Journal Association: By J. S. HAWLEY, A. M., M. D.

This pamphlet is devoted almost exclusively to the consideration of the therapeutical uses of pepsin, particularly in that morbid condition called dyspepsia. He gives several cases who were either restored, or materially improved by the use of this remedy. He has also found it available in the vomiting of pregnancy, and speaks favorably of its use in the diarrhœa of infants. In the latter disease we have frequently prescribed it with success. The author says, "in the promotion of alimentation in disease, the use of pepsin is the most important of all, and affords the largest field for its use," especially in the inanition of children and in persons recovering from exhausting diseases.

In speaking of the purity of American pepsin, he says, "it is of uniform strength, and capable of being kept indefinitely. Its superiority to the best and most approved foreign articles will appear from the following comparative experiment. Two drachms of fresh beef were subjected respectively to the digestive action of the three following varieties of pepsin, viz.: Boudaults Morson's pepsina porci and the American pepsin. The conditions in each were precisely the same, and the duration of the process alike in all. After the completion of the digestion, the following residua were left by each respectively: after digestion in American pepsin 5 grains dry; after each of the others 10 grains dry. Now one drachm of fresh beef dessicated to dryness weighs about 15 grains, so that one grain of completely dried beef represents 4 grains of fresh beef. It therefore follows that American pepsin digested 100 grains, or $\frac{5}{6}$ of the beef; while each of the foreign articles digested 80 grains, or $\frac{2}{3}$ of the beef."

On the Detection of Red and White Corpuscles in Blood Stains:

By JOSEPH G. RICHARDSON, M. D., Microscopist to the Pennsylvania Hospital. This pamphlet is extracted from the American Journal of the Medical Sciences for July, 1869.

This is a carefully written article bearing upon the vexed question of detecting human blood discs on a supposed murderer's clothing. He believes it is possible, and says, "although it must be admitted that the blood corpuscles of a few mammals approach so nearly in size to those of a man as to render their distinction doubtful, yet for the practical testing of blood-stains in criminal trials, we will rarely find that such a decision is necessary, since, as a rule, justice only requires that a positive diagnosis shall be made between human blood and that of animals which are commonly slaughtered for food, such as the ox, the sheep, the pig, or of birds, as for example, chickens, ducks, etc., in regard to all of which, I believe, when the discs have not undergone disintegration, a first rate $\frac{1}{2}$ inch objective will enable us to determine easily and beyond all question."

He gives the results of many very interesting experiments "which may prove useful to other microscopists engaged in similar studies, and contribute to extend the field of the instrument as an aid to medical jurisprudence."

A Contribution to the Therapeutics of Acute Rheumatism, based on a series of cases treated with Bromide of Ammonium: By J. M. Da Casta, M. D.

In this work Dr. Da Casta gives us the result obtained in the treatment of thirty cases of rheumatism.

Of this number twenty-two presented some abnormal condition of the heart, when the treatment was commenced. All recovered save one, whose life was terminated by the supervention of typhus fever. The Dr. sums up as follows: "The bromides are comparatively

a new remedy, and so much power is claimed for them which they evidently do not possess, that it behooves us to criticize closely any statement as to their real or supposed influence. But after carefully examining my records, I can not but think that their action on the disease in question is undoubted. They were, for purposes of observation, given alone, dissolved in water, or in water flavored by the addition of a little tincture of orange-peel. But such exclusive treatment would in ordinary practice not be necessary. They could be conjoined in special cases to alkalies, or to any remedy that the particular symptoms of the case might seem to render most advisable. Moreover, as we find with every treatment, there will be cases in which it may not suit. It is but a plan of treatment attended I believe with good results. But it remains to be worked out to what class of cases it is the most applicable, and in which its success is most striking."

"Over the pains and aches of chronic rheumatism the bromide of ammonium exerts an undoubted control; yet, on the whole, I believe it in chronic rheumatism to be decidedly inferior to the iodide of potassium; while I perceive but slight amelioration follow its employ in persistent swelling of joints of rheumatic origin; and none in rheumatism due to venereal taint."

Trichina Spiralis: By E. R. HUN, M. D. Presented to the New York State Medical Society, at their Annual Meeting for 1869.

This well written article sets forth concisely the history of the disorder, its symptoms and pathology. Dr. Hun's remarks are based largely upon results observed in a family who became infected with this parasite during the winter of 1868; and to him we believe belongs the credit of diagnosis. The pamphlet is illustrated by a well executed lithograph, representing the trichina in its various stages of development.

Second Annual Report of the Board of State Commissioners of Public Charities of the State of New York, to which is appended the Report of the Secretary of the Board. Transmitted to the Legislature, March 22d, 1869. Albany: The Argus Company, Printers. 1869.

This Report, it is suggested by the Commissioners, is soon to be followed by a more complete one, as they were not, in this, able to give "a comprehensive and detailed view of all the charities under their care." We do not, therefore, propose to comment or remark particularly on this report, but to reserve what we may have to say on such an important subject until the Commissioners have completed their proposed labor. They have classified the public charities under their care into, I. State Charities; II. Local Charities of Counties and Municipalities; III. All other charities receiving State aid; with various subdivisions under those several heads; allowing, however, the defects of the classification in some points, but justifying it on the ground of its practical convenience.

We extract from the report some paragraphs and statements respecting the State Lunatic Asylum:

The Managers of the State Lunatic Asylum deserve the thanks of the public for their appointment of a skillful observer, Dr. E. R. Hun, of Albany, as Special Pathologist, to make *post mortem* investigations, with a view to illustrate the pathology of insanity. This is clearly a step in the right direction, and important results may reasonably be anticipated.

The results of such inspection as the commissioners gave to the institution were wholly satisfactory. The buildings and grounds were clean and in good order, the patients were free from excitement, and the superintendence vigilant and thorough. The superintendent (Dr. John P. Gray) is making earnest efforts to advance the knowledge of insanity, and aims to make the practical working of the institution keep pace with advancement in medical knowledge. The managers have in an enlightened spirit seconded his efforts by providing an excellent medical library containing the most valuable works upon subjects kindred to the subjects of the institution.

The average expense for patient per week for twenty-six years, covering the items of officer's salaries, wages of attendants and other labor, expenses for provisions, household stores, medicine and medical supplies, furniture, beds, bedding, brooms, toweling, fuel, lights, miscellaneous expenses, books, stationery, printing, steward's petty expenses, &c., is given in a tabular form, from which we condense the following:

1843, \$3.18; 1844, \$2.59; 1845, \$2.04½; 1846, \$2.18; 1847, \$1.91; 1848, \$2.22½; 1849, \$2.24; 1850, \$2.38; 1851, \$2.66; 1852, \$2.63½; 1853, \$2.76; 1854, \$2.98; 1855, \$3.35; 1856, \$3.12; 1857, \$3.28; 1858, \$3.09; 1859, \$3.04; 1860, \$2.96; 1861, \$3.04½; 1862, \$2.82; 1863, \$3.42; 1864, \$3.89; 1865, \$4.15¾; 1866, \$4.26; 1867, \$4.48; 1868, \$4.72.

Average per week during 26 years, \$3.10.

The Pathology of Bright's Disease: By W. B. LEWIS, M. D., Lecturer on Renal Pathology in the Medical Department of the University of the city of New York, Microscopist of Charity Hospital.

This little pamphlet of twenty-nine pages, gives us a brief but comprehensive resumé of the history and pathology of Bright's disease. He dwells particularly upon the pathology of the disorder, and the work is illustrated by numerous wood cuts made from microscopical sections of the kidney in various stages of the complaint.

It is well worth careful perusal.

Vesico-Vaginal Fistule: and its successful treatment by the Button Suture. Read before the New York Medical Society, February 1869. By NATHAN BOZEMAN, M. D.

We have here the details of five consecutive cases with seven openings. They were all treated with the Button Suture, and were cured after only six operations. A measure of success highly gratifying.

Last Illness of Dr. Alden March. A Criticism on the Management of his Case. By CHARLES A. ROBERTSON, A. M., M. D. Reprinted from the N. Y. Medical Journal, 1870. (From the Author.)

Biographical Sketch of the late A. B. Shipman, M. D., of Syracuse, N. Y. Laid before the Onondaga Medical Society. By H. O. JEWETT, M. D. Cortland, N. Y. (From the Author.)

SUMMARY.

THE NEW HUDSON RIVER HOSPITAL.—IMPORTANT MEETING OF THE MANAGERS.—DESCRIPTION AND PROGRESS OF THE NEW EDIFICE.—A meeting of the Board of Managers of the new Hospital was held at the institution last Friday, to take into consideration certain matters relating to the progress of the building, the State appropriation having been nearly exhausted. Among the gentlemen present from this city, were Comptroller Wm. F. Allen, Hon. John V. L. Pruyn, President of the Board of State Charities, Hon. Amasa J. Parker, one of the Managers, and S. H. Sweet, consulting engineer for supplying the Hospital with pure and wholesome water. There were also present as Managers and by invitation, Hon. A. W. Palmer, Hon. William Kelly, Cornelius Dubois, E. L. Beadle, of Dutchess; Dr. E. R. Agnew, of New York; Dr. Benedict, of Brooklyn; Mayor Clark, of Newburgh; Mayor Morgan, of Poughkeepsie; S. D. Backus, Engineer; Dr. Buck, of Christiania, Sweden; Judge Wheaton, Mr. Eastman and James H. Weeks, of Poughkeepsie; Dr. Wm. H. Van Buren and Dr. Vance, of New York, &c., &c.

Everything connected with the progress of the building was found to be in the most satisfactory condition, and the highest praise was awarded to Dr. Cleveland by all parties, for the skillful manner in which he had conducted the affairs of the new enterprise.

When completed, the building will be one of the handsomest of its kind in the world, affording views to the north, west and south that cannot be surpassed for variety of natural scenery, and the beauty of the extensive grounds immediately surrounding it.

The following historical statement, description of the structure, and other interesting matter, was presented to the Board of Managers by Dr. Cleveland, and through his courtesy we are enabled to give it to our readers :

ORIGIN OF THE PLAN.

In the spring of 1866, the Legislature authorized the appointment of commissioners to select a suitable location for the Hudson River State Hospital for the Insane. In January of the following year,

the commissioners reported to the Legislature that they had received from the citizens of Dutchess county, *as a free gift to the State*, a site consisting of two hundred and six acres near the city of Poughkeepsie, and fronting upon the Hudson River. The site thus generously presented to the State, was purchased by the citizens of Dutchess for the sum of \$85,000. The location, as respects the eastern tiers of counties which comprise the Hospital District, is geographically central, easily accessible by river and railway, and distinguished for its salubrity and commanding beauty.

The following gentlemen constitute the Board of Managers: A. W. Palmer, William Kelly, Cornelius R. Agnew, Amasa J. Parker, Edward L. Beadle, George Clark, Joseph Howland, and W. C. Benedict.

THE CURE OF THE INSANE.

There are no better indices of the successive advances that have been made in the treatment of the insane than are afforded in the use of the terms Bedlam, Retreat or Asylum, and Hospital. Modern science regards insanity as merely a symptom of cerebral disease—of a disease quite as susceptible to medical treatment as other forms of bodily ailment. In accordance with this modern view this institution is called an *Hospital*.

The universal testimony, based upon their own experience, of physicians having charge of institutions for the insane, both in this country and abroad, is to the effect that when patients are subjected to early and judicious treatment, in the early stage of this disease, from eighty to ninety per cent. will recover. "It is the neglect of this early treatment," remarks the late Dr. Brigham, of the Utica Asylum, "that fills the alms-houses and asylums of the country with incurable insane."

HOW MONEY IS SAVED BY HOSPITALS FOR THE INSANE.

Dr. Macdonald, a former superintendent of the Bloomingdale Asylum, estimated the recoveries in recent cases subjected to treatment, at 76 per cent., while of chronic cases but 7 per cent. are restored. In 1865, Dr. Willard, of Albany, reported to the Legislature that there were 1,345 insane persons in the poor-houses and county receptacles of the State. On the basis of Dr. Macdonald's calculation, 7 per cent., or 192 of these would recover without treatment, and 1,253 would remain in the county-houses, a public charge, during the 18 years which the life tables of Le Cappalain and of the English Lunacy Commissioners show to be the average duration of life in the incurably insane. Estimating the weekly cost in the poor-houses, of these 1,253 persons at \$1.50 each, the expense of maintenance would be as follows: For one week \$1,879.50, for one year \$97,734; and for the 18 years of lunacy life, the enormous sum of \$1,759,212. Had these 1,345 received the benefits of early hospital treatment, by the above calculation, 1,022 would have been restored to health; their average period under treatment in hospital would have been ten months, at a monthly cost to each of sixteen dollars, and the aggregate expense of their care and cure would have amounted to \$163,000, and the tax-payers would have been relieved of \$1,271,888 assessments for their support.

NEW YORK IN THE BACKGROUND.

The reflection is not satisfactory to our State pride, that New York has made less provision for her insane than most of the States of the Union. With a population equal to one-tenth of the United States, and a territory stretching from the ocean to the lakes, this great State has in operation but one general hospital for this class of unfortunates. It is, however, a matter of congratulation that the wants of the western geographical half of the State, in this respect, will soon be met. The great State establishment at Utica, the Willard State Asylum soon to be opened on Seneca Lake, the Criminal State Lunatic Asylum at Auburn, the projected State Hospital for the Insane at Buffalo, the State Idiot Asylum at Syracuse, the State Inebriate Asylum at Binghamton, and the State Blind Asylum at Batavia, are worthy State charities that will amply provide for the necessities of the western section. While, however, we rejoice at the good fortune, present and prospective, of the western portion of our commonwealth, we cannot forget that in the whole territory embraced in the eastern half of the State, and among a population of 3,000,000 souls, there is not one single State charitable institution in operation, and that the only State charity as yet projected in all this region is the Hudson River State Hospital, with its limited appropriations.

THE EASTERN HOSPITAL DISTRICT.

The counties to comprise the Hudson River Hospital District will probably be the following: Albany, Clinton, Columbia, Dutchess, Essex, Franklin, Greene, Kings, New York, Orange, Putnam, Queens, Rensselaer, Richmond, Rockland, Saratoga, Suffolk, Sullivan, Ulster, Warren, Washington and Westchester—22 counties. From these counties there have been under treatment at the Utica Asylum during the past nine months, 345 patients. In 1865 there were in confinement in the poor-houses and receptacles of these counties 417 insane.

DESCRIPTION OF THE NEW BUILDING.

A brief description of the plan of the Hudson River Hospital, and an account of some of the embarrassments attending its construction we trust may not prove wearisome.

The general form of the Hospital buildings is that of an extended V, the point of the letter representing the central edifice fronting westward, and the lines the two wings, which, however, do not recede in oblique straight lines, but fall back in successive offsets at right angles with the direction of the main front, so that in each wing there are three longitudinal portions running north and south, and two transverse portions running east and west. The direct distance between the extremes of the wings is about fourteen hundred feet, while the central building is about five hundred feet in advance of the rear line.

The hospital is planned to accommodate about 200 patients of each sex, the wards for men, constituting the entire wing to the south, and the wards for women the entire wing to the north of the central building, which is devoted to the various departments of general management. The chapel is placed between the wings and

in the rear of the central building, so that patients of one sex are prevented from looking into the wards or yards of patients of the other sex. The kitchen and general service department is located in the rear of the chapel.

The department for each sex consists of four wards on the principal floor, four wards on the second floor, one ward on the third floor, and an infirmary on the third floor separated entirely from the rest of the wards.

"Each ward is furnished with a hall and fire-proof staircase on the front line of the building, and roads of approach are intended to be arranged so as to give a separate access to the entrance hall thus attached to every ward. A hall, with fire-proof stair-case communicating with an airing court, is arranged also in each ward on the rear line of the building.

The wards for the more excited patients are farthest removed from the central building, and have bedrooms only on one side of the corridors. For the sake of economy this plan is not followed throughout, bedrooms being placed on both sides of the corridors in the wards for quiet patients. In the portions of the building thus arranged, open spaces are left in the center of the front line of each section for light and circulation of air. These spaces marked 'Ombra' on the plans, are intended also to be used by patients in mild weather for open air exercise, in immediate connection with the wards to which they are attached.

It will be observed that in the wards containing bedrooms on both sides of a corridor, the living-rooms, lavatories, etc., are arranged on one side only of a separate corridor that runs at right angles to a bedroom section. Every ward, in addition to its dormitories, is provided with a living-room of large dimensions, having windows on three sides of it; a dining-room, with pantry attached, communicating by lifts with the basement corridor connecting with the service department; a lavatory, a room in which a patient may be thoroughly washed from head to foot, either in a sitting or standing posture, the whole floor and the sides of the room for six inches in height being made water-tight, and fitted with a wash-pipe; a bath-room, with the bath placed in the center of the apartment, and with screened dressing-space attached; a room containing water-closets and urinals, and a sink for the use of the attendant; a linen and clothes room, and a dirty linen shaft large enough to be used for hoistway purposes.

Each ward is provided with one single and double bedroom for attendants. At the extreme end of the convalescent ward on the principal floor nearest the central building, is a reception room in which patients may see their friends.

The chapel has four hundred sittings. The upper portion of the chapel tower will contain the main distributing reservoir for supplying the hospital with water. The tower is furnished with a clock which will be visible from almost every ward. The clock-works will be connected with the bell in the belfry. In the basement of the chapel there are suits of rooms for Turkish baths, and a large general store-room.

Over the building used for kitchen offices is planned an amuse-

ment room and theatre, which can be approached under cover from each wing. Attached to the convalescence wards on the men's side are a library, a writing-room, and a billiard-room, and in a corresponding position on the women's side, a library, a sewing-room, and a gymnasium. The tailor's room can also be approached under cover, by patient's from the wards on the men's side, and the ironing-room from the wards on the women's side. The kitchen and general service department are provided for as shown on the plan, in a detached building on a level with the basement floor of the main building, so that a railway may run from the kitchen to the lifts attached to the dining-rooms of the various wards. The laundry buildings will be placed near the river. Bed-rooms for the servants are provided near the kitchen department. Work-shops for carpenters and other mechanics are planned in the vicinity of the kitchen building, and a boiler-room, with engine and fan-rooms, are located at the extreme rear of the space occupied by the service department and work-shops. In each wing a cold-air shaft, running under the principal floor and connected with the fan-room, is arranged to carry fresh cold air by means of separate flues to every room in every ward, and in winter steam heat is intended to be applied on the basement level at the points of junction at which the vertical flues branch from the general horizontal air-shaft. Ventilating flues are provided for the different apartments, and terminate in chimneys or under ridge-roofs.

Each wing is connected with the central building through a one-story corridor, to which a conservatory or plant-cabinet is attached. It is intended that this structure should be furnished with shrubs and plants of a somewhat hardy character, so as to present at this available point a pleasant general effect to patients and visitors, without any great expense for maintenance. It may be observed in this connection, that on entering the building the view through the window across the hall is terminated by the detached chapel, and that generally it has been thought a matter of considerable importance to secure a cheerful, liberal first impression in connection with the main entrance to the building.

The board room is on the principal floor of the central building, which also contains the reception room for patients, and the offices for the medical department, and for the steward and matron. The upper stories of the central building are designed for the medical and other officers of the hospital.

The general character of the elevation is simple, the lines following strictly the necessities of the plan. The materials to be used are hard North-river brick, with a better quality for face work. Ohio stone has been chosen for strings and window-heads, with bluestone introduced sparingly to increase the artistic effect. The basement will be constructed entirely of blue-stone ashlar, where it shows above ground.

All the interior walls are to be solidly built of brick—the floors will be deafened in the most effectual manner—fire-proof stairways will be adopted throughout, and all possible precautions will be introduced for the safety of patients.

While the interior arrangements and finish will be attractive, the

exterior of the structure will be made bright and inviting to the eye, not by columns, entablatures, carvings or heavy architectural detail, but by the varied outline of its walls and roof, the artistic spacing of its wall openings, the deep shadows of the window recesses, and the skillful contrasting of colors in the arrangement of the stone and brick of the walls.

THE WORK UPON THE EDIFICE.

Work upon the hospital was commenced late in the season of '67, but little was done that year upon the building except excavating the cellar and putting in the foundation of one traverse section. During the same season a wharf was built, roads were made to facilitate the transportation of material, shops, tools and machines were prepared, a quarry was opened on the grounds, and a large quantity of building material was hauled to the site.

The year 1868 saw one section of more than 230 feet in length, one-half three and the balance two stories in height, walled and roofed. This section is now all plastered, and is in the hands of the joiners, who have so much of the inside wood work done that the building will be completed this year.

Another section, 310 feet long, was begun this season. Most of the materials to complete its exterior are on hand. Nearly all the basement is completed, and much work has been done on the walls of the principal story. If the work continues to be pushed as at present, this section will be enclosed before winter, and could be occupied by patients a year from this time. The two sections when completed will accommodate about seventy-five patients.

In the construction of the building all materials are bought on the best terms, and all work is done by men hired by the day and working under skillful foremen. Every precaution is taken to insure durability, and ingenuity is taxed in labor-saving appliances. Steam power is used wherever practicable, and the system of patterns and gauges which has proved so useful in the manufacture of guns, watches, etc., is applied to building operations in novel and interesting ways, and with advantage to the quality and economy of the work.

A strict account is kept of each man's time and of the work he does, so that the cost of the building can be accurately subdivided. So far as comparisons can be made, none of the work has cost so much as individual mechanics pay for similar service, and the expense to the State if it were done by contract would probably be from 10 to 25 per cent higher than it now is. Of course comparisons must be made with reference to local wages, which are ruled by those paid in New York city, and which are far beyond anything dreamed of in more retired districts.

NEED OF PROMPT APPROPRIATIONS.

Much of the effort to prosecute the work in the most economical and advantageous manner has, we regret to say, been neutralized by the policy adopted by the Legislature in its appropriations. The fact seems to have been overlooked that an expenditure too small to effect its purpose in reality defeats it, and that false economy is only another name for the worst sort of extravagance. It

is evident that the speedy completion of the hospital would bring speedy returns from the money invested, and so far as its influence extended, the increasing tide of pauperism resulting from neglected mental disease would be arrested. Its speedy completion would moreover ensure a very considerable diminution in the cost of materials and in incidental expenses.

Unfortunately, the small amount accorded by the legislature is robbed of much of its value by the delay of the appropriation until the very close of the session. The managers cannot be certain that any appropriation will be made, and when it is announced the spring is half gone. Then plans must be prepared, and later still materials ordered, stone quarried, timber cut, bricks burned, and all the delays encountered which are incident to the filling of orders sent late into a crowded market. The most favorable season for building is occupied with the necessary preliminary arrangements for commencing work, and when the work which should have been out of the way in July, actually begins in earnest, the sun is declining, and autumn frosts and storms and shortening days have arrived. These evils can only be avoided by legislative appropriations made early in the session, and these appropriations to cover two successive years.

That a more liberal and business-like policy should be inaugurated in regard to this institution, is not a matter personal to any of its officers, except as they desire to have the service they render to the State and to the humane cause they represent, made more effectual. It is a matter, however, which interests every taxpayer in the district for the benefit of which this hospital is established.

There is no moneyed or political interest to maintain agents at Albany to tease committee-men in its behalf. Measures more strenuously urged will crowd its claims aside unless the public voice shall call for what the public welfare requires.—*Albany Argus, Oct. 4, 1869.*

E. S. M. HAINES, of Albany, has prepared a catalogue of Pathological Stereographs. The negatives are made from the fresh specimen, by Mr. Haines, under the supervision of Dr. E. R. Hun. They are therefore accurate representation of pathological conditions.

Mr. Haines has rendered the medical profession a service, by offering to take "stereographs of any pathological specimen sent him, on condition that it arrives in good order, and that the sender purchase not less than five dollar's worth of the plates." He has already taken between fifty and sixty plates, some are colored to represent the actual specimen, and some are plain.

Further particulars may be obtained by addressing E. S. M. Haines, 478 Broadway, Albany, N. Y., who will furnish priced catalogues upon application.